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BASIC STATISTICS OF THE REPUBLIC OF HUNGARY
2004

THE LAND

Area (km2)	93 030
Arable land (km2)	44 998

THE PEOPLE

Population (thousands, end year)	10 098	Population of major cities (thousands):	
Urban population (per cent of total)	65	Budapest	1 739
Rural population (per cent of total)	34	Debrecen	206
Projected population in 2005 (1995 = 100)	97.5	Miskolc	182
Employment (thousands)	3 900	Employment by sector (per cent of total):	
Unemployment rate	6.1	Agriculture	5
(per cent of civilian labour force)		Industry	33
Participation rate of 15-64 year olds (2004)	60.5	Services	62

THE PARLIAMENT

Number of seats	386
Number of political parties (elections of April 2002)	4
Share of seats held by governing coalition (per cent)	51
Next election	2006

PRODUCTION

GDP (HUF billion, current prices)	20 338
GDP per head (current PPP in USD)	15 731
Consumption (private, per cent of GDP)	54
Gross fixed capital formation (per cent of GDP)	23

PUBLIC FINANCE

Central government budget balance (per cent of GDP)	-4.8
General government revenue (per cent of GDP)	45
General government balance (per cent of GDP)	-4.4

FOREIGN TRADE

Exports of goods and services (per cent of GDP)	65
Imports of goods and services (per cent of GDP)	68
Official reserves (average, incl. gold, SDR billion)	10
Total gross external debt (euros billion)	47
Total gross external debt (per cent of GDP)	58

THE CURRENCY

Monetary unit: Forint[1]

Forints per euro:		Forints per USD:	
Average, 2004	251.68	Average, 2004	202.63
End December 2004	245.93	End December 2004	180.29

1. *Source: National Bank of Hungary* .

EXECUTIVE SUMMARY

The composition of growth of the Hungarian economy has become healthier and real convergence looks set to be on a sustainable path. While most reforms to establish a flourishing market economy have been carried out and the current government is launching a new reform initiative of "100 Steps", more needs to be done in two broad areas in order to maintain high growth:

- *Achieving a smooth entry into the euro area: Frequently missed policy targets, tensions between the government and the Central Bank and stubbornly high twin deficits have established an unhealthy climate of financial volatility, which contrasts with and may even risk threatening the rather smooth process of real convergence.*
- *Increasing trend growth by both raising the employment potential and trend productivity growth: A large share of Hungarians with some work capacity is not working in part because of the way social benefits are designed. Low employment is aggravated by impediments to regional mobility of the labour force. Hungary needs to move further up the value added chain. This process for the time being rests very much on investments by foreign companies while innovative activities and commercial applications of own research remain limited.*

Entrenching macroeconomic stability implies achieving fiscal targets for euro entry within a medium term framework

Putting government finances on a track that meets the criteria for euro entry is by far the most urgent challenge for Hungary. Meeting the targets of the budget for 2005 is essential to recover credibility. Budget practice could be improved by using conservative estimates for the current year's deficit outcome in making budgets for the upcoming year and making prudent assumptions on economic activity, revenue and spending items. Revenue windfalls should be used for debt reductions rather than incremental spending. The medium term fiscal framework should be strengthened.

Reforming health care is important for long term fiscal sustainability

Public sector spending on health care will rise in the future because of ageing and technological developments. Reforms should focus on reducing redundant hospital capacity, better gatekeeping and measures to limit excessive prescriptions of pharmaceuticals.

Monetary policy management could be refined

Inflation targets should be set for a fixed number of quarters ahead. Changes in Monetary Council membership should become smoother. More transparency and better communication of the achievement of fiscal targets by the Ministry of Finance would allow the Central Bank to reconsider the amount of detail and comment on fiscal projections in the Inflation Report.

The employment potential can be raised

Cuts to the tax wedge should be better designed so as to avoid high marginal tax rates above the minimum wage. The early retirement scheme which has no actuarial adjustment should be phased out and the remaining scheme should be made actuarially fair around the statutory retirement age. Inactivity traps in benefit programmes should be tackled by making the unemployment benefit programme relatively more attractive for short term unemployed while applying a "mutual obligation" approach to all benefit recipients with some work capacity. Particular attention should be devoted to further curbing inflows into disability pension.

Innovation policy has become a key priority for the government

The government is putting strong emphasis on targeted measures to support innovation. These programmes should be closely monitored and closed if found to be ineffective. Improvements in framework conditions for innovation, including in the general business environment, in public research funding, and in tertiary, vocational and compulsory education should receive more priority.

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of Hungary were reviewed by the Committee on 7 June 2005. The draft report was then revised in the light of the discussions and given final approval as the agreed report by the whole Committee on 20 June 2005.

The Secretariat's draft report was prepared for the Committee by Philip Hemmings, Alessandro Goglio and Márton Szili under the supervision of Andreas Wörgötter.

The previous Survey of Hungary was issued in May 2004.

This Economic Survey may not include an examination of certain policies that are relevant to the country but fall within the competence of the European Community. While some of these policies may be examined in the Survey of the Euro Area, other policies may not be examined by the EDRC, as the European Commission currently maintains that the Economic Surveys should be limited in their coverage. No limits apply to the policies that can be covered in the Economic Surveys of other OECD countries.

The Commission and the Member States of the European Union are working actively on ways of reviewing EC and EU wide policies within the context of the EDRC.

ASSESSMENT AND RECOMMENDATIONS

The Hungarian economy is catching up and growth is becoming more balanced

Hungary's expansion is becoming better balanced. Manufactured exports and investment have both picked up and GDP growth is expected to be about 3.5% this year and increase further to 4% in 2006. The rise in export and investment growth follows a period in which aggregate demand was largely driven by unsustainable increases in government spending and by private consumption that was fuelled by minimum wage hikes and large increases in public-sector wages. With the impact of these measures coming to a close and supportive external developments, the composition of growth has become healthier. The capacity of the Hungarian economy to respond fairly rapidly to this change in macroeconomic signals is a tribute to current and previous reforms.

Building on this base and ensuring that growth can remain healthy over the long-term will require further improvements to the macroeconomic and structural environment for business. If manufactured exports are to play an important role in growth then, as local wages catch up with the rest of Europe, producers will need to continue moving up the value-added chain through increasing capital intensity while workers need to upgrade their skills in order to remain employable. The service sector has to be the main source of new jobs to help absorb labour from declining manufacturing sectors and to bring more of Hungary's large pool of non-employed into the labour force. And, as in manufacturing, the service sector has to move up the value added chain through productivity improvements within firms and by compositional shifts towards high-value-adding activities.

However, key challenges lie in euro entry, public spending, employment potential and business support

The broad policy challenges to improve macroeconomic conditions and the structural environment for business can be summarised as follows:

- *Entrenching macroeconomic stability and smoothing entry to the euro area:* The government aims to join the euro area in 2010. This will require further co-ordinated efforts to reduce inflation and the fiscal deficit by the Central Bank and the government. Going forward, the Central Bank should aim for slow but sustainable further reductions of inflation, avoiding unnecessary sacrifices in output growth or excessively high interest rates. In fiscal policy, further reductions in the deficit have to come about largely through spending cuts because the level of taxation is already harming competitiveness and labour utilisation as well as encouraging grey-sector activity. This implies that tough spending discipline will be needed to meet the Maastricht criteria. Above all, a more effective communication strategy and the visible achievement of targets will be essential to reducing the rather high degree of financial instability that Hungary has experienced.

- *Building sustainability in public spending:* Tough budget discipline needs to be backed up by structural reforms to public spending that redefine service commitments and re-organise systems towards more efficient provision. This *Survey* assesses the best way forward in one of the key areas, namely health care. While substantial reforms have been made over the past decade, results so far are somewhat disappointing. Furthermore, the demand for health care is likely to rise significantly in coming decades due to a combination of ageing, rising incomes and new treatment options, underlining the need for additional reforms. The costs of failure to reform would be prohibitive and would undermine the sustainability of public finances.

- *Raising employment potential:* There is substantial room for increasing Hungary's employment potential. For instance, OECD calculations suggest that the employment rate could be far above current levels. In part the low employment rate arises from high tax wedges that are damping labour demand and encouraging grey-sector employment. But there are serious disincentives to work in current assistance schemes which have generated inactivity traps. In particular large inflows into disability benefit and early retirement schemes mean that many non-employed of working age with some remaining work capacity have little or no incentive to re-enter the official labour force.

- *Getting the right menu of business support and regulation:* Reflecting the focus on competitiveness, the government is conducting a campaign of general and targeted measures in corporate taxation and business support. One focus is to encourage greater levels of innovation, and this Survey takes an in-depth look at the recent steps taken. Policymakers face the same basic uncertainties in developing innovation policy as those found in other countries: while Hungary indeed has a relatively low level of innovative activity, policymakers have difficult decisions in deciding how far, and with what degree of targeting, policy incentives should go.

Despite some unwinding of tensions in the macroeconomic policy mix, concerns remain about the level of co-ordination

In 2003-04 there were strong tensions in the macroeconomic policy mix that adversely affected market confidence. Uncertainties about the future course of exchange rate policy provoked attacks on the forint in both directions, establishing an unhealthy environment of volatility to which the Central Bank had to respond with strong policy rate moves. Booming domestic demand and persistently missed fiscal targets generated doubts about a rapid fall of inflation, which had surged after a series of administrative measures aimed at increasing budget revenues. High interest rates were maintained well into 2004, even as the forint appreciated to near the strong end of the target band. These developments provoked another round of public disagreement on the conduct of policy between the Central Bank and the government. However, a series of reductions in the base rate since the second half of 2004 has reduced tensions considerably, and further rate cuts are expected. Indeed, monetary policy was tight in 2004 and, because of lags in policy impacts, inflation at the end of 2005 is likely to be within the target band but well below the centre of it. Despite the easing of tensions, financial markets still regard progress in inflation and deficit reduction as fragile, adding nervousness to the foreign exchange market that is compounded by the large current account deficit.

Some refinements to targeting rules and institutional arrangements in monetary policy would help euro entry

Going forward, the inflation outlook now seems well on track to fulfil the Maastricht criteria in time for euro entry in 2010. Inflation in the year to March 2005 was 3.5%, not far off the level likely to be needed to meet the inflation criterion. Some fine-tuning of the Central Bank's inflation targeting regime in the run up to euro entry would help avoid missing policy goals:

- The current approach to setting inflation targets involves the setting of new end-of-year inflation targets once a year, implying that in monetary policy the time lag to target varies during the year. *This could be remedied if the target was set in terms of a fixed number of quarters ahead or if a rather longer-term target were set.*

- The authorities should ensure that the schedule of Monetary Council members' terms of office avoids the replacement of several council members at the same time to reduce the risk of actual, or perceived, swings in the outlook. Though it is too late to avoid this for the additional four members that recently increased the council from nine to thirteen members earlier this year, *future changes in Monetary Council membership should aim to avoid such situations arising.*

Fiscal consolidation has been a lot less robust than it appears

Ensuring fiscal sustainability must be a key priority. At the first glance, the budget deficit also looks well on track to meeting the 3% Maastricht limit required for euro entry. In 2004, the deficit was 4.5% of GDP, down from 6.2% in 2003 and 8.5% in 2002. But, progress in sustainable fiscal consolidation has been less impressive than these deficit figures imply. The deficit reductions partly reflect one-off accounting items and changes in accounting practices. Stripping away these influences reveals that the adjusted deficit is just 1.1 percentage points lower since the government came into office in 2002, which is about half the deficit reduction initially planned by the government over this period. *Meeting the fiscal targets necessary to enter the euro area will thus require major efforts in the years to come.*

This year's budget relies heavily on one-off operations. The 2005 budget outlines plans for a 0.9 percentage-point deficit reduction to 3.6%. Most importantly, the deficit is being helped by a new public-private partnership deal for motorway construction that is taking an amount equivalent to 1.4 percentage points of GDP off budget, suggesting that the 2005 budget, together with the increase in private infrastructure spending, is in fact expansionary. *Any slippage from this target should be avoided.* Achieving targets beyond 2005 will have to take into account that from 2007 onwards adjustments relating to compulsory private pensions can no longer be included in the headline Maastricht deficit, though the net cost of the pension reform shall be also partially taken into account for the decision of the Council of the EU on the abrogation of the excessive deficit, if the deficit has declined substantially and continuously and has reached a level that comes close to the reference value.

Failure to reach targets and blurring of deficit outcomes is damaging credibility. To remedy this, a transformation in the attitude to fiscal policy is needed. In particular, the authorities should:

- *Use realistic estimates for the current year's deficit outcome in making budgets for the upcoming year, make prudent assumptions on real GDP growth and deflators, and improve projections of revenue and spending items. To make sure that these measures are effective, strict rules on the use of positive revenue and expenditure surprises should be applied.*

- *Communicate more transparently on the contents of the budget, particularly on the key factors behind shifts in revenue and expenditure, and communicate more openly on positive and negative developments over the course of the budget year.* This would also allow the Central Bank to reduce the level of comment and detail on its fiscal projections in quarterly inflation reports.

- *Resist the temptation to exploit accounting rules in order to make the progress in headline deficit figures look more impressive.*

Further steps to tighten spending discipline have been taken recently, but more must be done to ensure fiscal sustainability

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In terms of concrete measures to improve spending discipline, welcome new rules have been introduced including expenditure freezes, tighter conditions on unspent appropriations and stronger ceilings on decentralised agencies. *These steps should be backed up by stronger medium-term fiscal commitment. In particular, there should be a more strongly binding commitment to the fiscal objectives laid out in the Convergence Programmes. In addition, within the budget process itself, a medium-term framework should be introduced and long-term fiscal projections regularly updated.*

In the public-sector, health care services in particular need further reform

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Health care is an area where spending discipline will become increasingly important. The demand for health care services is likely to rise significantly in coming decades in a population that already places high demands on the health system. While public spending on health care is not yet worryingly high, failure to speed up modernisation of the health system could lead to significant increases in spending or unacceptable falls in the range and quality of public health services. While the health system is based on a purchaser-provider model, and reforms over the past decade have generally moved in the right direction, progress has been slow. However the government is launching a series of measures as part of the Hundred Steps programme.

The slow progress in modernising the health care system is reflected in key weaknesses in the efficiency of hospital care, failure to prevent uneconomic use of hospital services and excessive spending on prescription drugs. These problems need to be tackled along the following lines:

- *The allocational efficiency of resources across all providers in the purchaser-provider system needs to be improved. In particular, caps on reimbursements should be made more needs-based to take account of local differences in population characteristics. Hospitals have to be put under more pressure to co-operate or merge in order to improve cost effectiveness.*

- *Individual hospitals also have to be given more scope in managing resources and greater incentives to make efficiency improvements.* Responsibility of owners and managers for deficits and debt needs to be increased and made more congruent with service obligations. This would give more control over investment expenditure and greater freedom in the management of human resources while also increasing accountability.

- *"Gatekeeping" by general practitioners for access to specialists needs to be strengthened to help reduce avoidable use of hospital services. The use of hospital services also needs to be more effectively controlled by better checking of treatment decisions, particularly those where there are alternatives to treatment requiring long stays in hospital.* Some financial and contractual changes have already been made and others are planned. Nevertheless, further policy work will be needed.

- *General practitioners and specialists also need to be made more cost-conscious in drug prescription through reforms of prescription guidelines and improved monitoring of doctors' behaviour.* This should encourage greater use of low-cost drugs. The authorities also need to maintain their current contract with the pharmaceutical companies, so that pressures to remove caps on government subsidies can be resisted.

Cuts to the tax wedge to increase labour utilisation and competitiveness should be better designed

Fiscal pressures inevitably make it difficult for the authorities to achieve substantial across-the-board cuts in the tax wedge on labour, and this will continue to be the case without significant further economies in public spending, though effective tax-base broadening measures could also finance tax rate cuts to some extent. In fact, the government has been finding some room for cutbacks on both the employers' and employees' components of the wedge. More are planned for the future. Though these are welcome, there is room for improvement in the envisaged policy measures.

- In particular the strategy on personal income tax reductions should be rethought. Reductions in tax bills for low-income earners are generated through tax allowances that imply zero tax at the minimum wage and reduced taxation for a large share of taxpayers earning above the minimum. This approach has the drawback of raising effective marginal tax rates sharply over a range above the minimum wage. In addition, the timing of the large recent tax cut to middle and upper income recipients arising from a shift from three to two tax brackets is questionable. *A more appropriate approach to cutting taxes for both low and high earners would be to scrap the special zero-tax and allowance, replace them with a universal tax allowance and go for smaller tax reductions through bracket increases. The whole package should be phased in according to the budgetary room made available by savings on the expenditure side.*

- *The size of the bias towards families with children should be reconsidered.* Some improvement in the way child financial support is delivered is scheduled as part of the Hundred Steps programme. However, while there are understandable motivations (such as the low birth rate), the gap in post-tax incomes between households with and without children is exceptionally high in international comparison and there may be more efficient ways to reach family policy objectives.

Reforms to disability benefit are underway but progress in bringing recipient numbers down is likely to be slow

The number of disability benefit recipients grew massively over the 1990s, and the system has clearly ended up providing welfare to a much wider group than intended. In recent years policies have focused on containing the inflow by tightening up assessment, and there have been welcome falls in inflow in the past couple of years. Medical guidelines have recently been streamlined as a first step towards a system that takes more account of remaining work abilities and which encourages rehabilitation. However, given the often weak outcomes internationally from rehabilitation, the authorities need to be cautious in introducing new measures that require significant additional resources. *Further tightening of the screening procedures for entering disability might be a more effective instrument.*

Though there has been welcome adjustment of sick-pay rules for those facing unemployment, the system remains open to abuse and further reform is needed. *The benefits for those facing unemployment while being sick should be brought in line with the unemployment benefit. In addition, granting of the discretionary 3-month prolongation of sick pay for those facing unemployment should be limited and further cuts to the standard period allowed for the unemployed to get sick pay extension should be considered.*

Judicious increase in unemployment benefit could help widen labour-force attachment among the non-employed

Many people effectively exit from the labour force and go on disability benefit, or to a lessening extent sickness pay, because these schemes offer more money than the unemployment benefit (which is capped at a fairly low level). *One way to retain some of the advantage of the current benefit amount, while dissuading application to other benefit schemes, would be for the unemployment benefit to start relatively generously but be reduced over time. Contact with the labour market offices also needs to be strengthened.* Recent measures as part of the Hundred Steps programme have been undertaken. Requirements for job-search activity could also be boosted. While an activation scheme introduced in 2003, which requires especially intensive job-search, has thus far yielded disappointing results, the international evidence is that a strong "mutual obligations" approach including active job search requirements and efficient placement services, is an effective framework, and efforts should continue to improve its implementation in Hungary.

Reforms to early retirement could go further

Early retirement options mean that most people become pensioners at least two-years earlier than the standard age of retirement, *i.e.* somewhere below 60 for men and (currently) below 57 for women. These relatively low retirement ages are, in part, justifiable because of shorter life expectancy but nevertheless there will be a need for increases as life expectancies rise. There are some welcome changes already underway or in the pipeline (including further increase in the standard retirement age for women to 62 years) but additional reforms could be considered. *In particular, the system would be improved if the Advanced Retirement Pension were phased out and if the pension adjustments in the Reduced Advanced Retirement Pension were reformulated.*

Local labour mobility is hampered by weak progress in urban-transport reform and policy options to increase regional mobility seem limited

In transport infrastructure there is strong and appropriate policy attention to motorway construction. There has, however, been rather weak progress in urban transport systems, and this is restricting commuting distances. Indeed it is questionable whether sufficient progress on urban transport can be made within the current structure of transport policy. *The authorities should consider alternative structures that improve the cohesion between responsibility, administration and financing.* Movement between regions is affected by high levels of home ownership and is also discouraged by regional differences in the purchasing power of the minimum wage and welfare payouts. However, the room for positive policy moves on these fronts seem limited: active policies to reduce home ownership would in themselves be distorting and the Hungarian authorities argue that making minimum wages and welfare payouts vary across regions to reflect local price differences would be too difficult to administer. *Nevertheless, the authorities should explore whether there are impediments to the development of rental low-cost housing markets in high growth regions.*

The government is paying special attention to innovation

The government's focus on increasing innovation has included setting up a new decision-making structure involving senior politicians which has a welcome focus on encouraging commercially sustainable innovation. In terms of specific measures, R&D grants are being funded through a new special levy on businesses and grant allocation for applied research is focusing more on research with strong commercial potential. There is also greater targeting on specific areas of scientific research. In addition, tax breaks for R&D spending have been increased and regulatory changes have made it easier for universities to create spin-off companies.

All forms of innovation benefit from healthy general business conditions

Healthy general business conditions are the precondition for Hungarian innovation to take off. This should be a key consideration in overall thinking on innovation policy. The country's sizeable small-and-medium enterprise sector means the creation of new products and processes on an informal basis is an important aspect of innovation in a broad sense. In addition, good framework conditions are also important for ensuring that the embodied know-how in imported capital equipment and foreign business techniques continue to pull Hungary up the value-added chain through imported innovation. In terms of framework conditions relating to ICT, a significant step to further strengthen competition among providers was taken just last year (the 2004 Telecommunication Act) but it is too early to tell how it is working. However, price data signalling relatively high telephony costs suggests that *the market, particularly the dominant player, needs to be closely monitored.*

Critical evaluation of targeted measures should now be a top priority

Following the recent changes made in the financial incentives for R&D through tax relief and grants, the authorities should now focus on critical evaluation of the impact of measures. This process should bear in mind the following:

- R&D tax relief is already high in international comparison and coupled with the often sceptical conclusions from research on the impact of tax relief, suggests that these incentives may be too high and deadweight costs could be substantial.

- Given the increased spending on grants, it is important that the authorities follow up on plans to improve monitoring of individual programmes. *The authorities should also consider the potential for spillover effects to other sectors in deciding which areas to target. Unsuccessful programmes should be closed.*

- *Assessment of the Innovation Fund system should focus on whether the opportunity for businesses to reduce their innovation levy by increasing R&D activity has successfully widened private-sector innovation.*

More regulatory work is needed in to strengthen commercial orientation in public-sector research

One of the key steps to increase commercially oriented public-sector research has been the introduction of lighter regulations relating to university spin-off companies and the secondment of researchers to the private sector. However, more regulatory work needs to be done, particularly regarding the Hungarian Academy of Science (HAS). *One way of helping HAS reform would be to raise the importance of joint work with business in evaluating HAS's research activities and to strengthen the link between performance and budget allocation. Reforms may also require more performance related pay components for HAS's researchers, and the abandonment of unconditional tenure.*

In tertiary and vocational education, weak response to changing labour market demands could stifle innovation

The introduction of shorter and more vocational degrees and several other measures, as part of a recent act on higher education, that strengthen responsiveness of tertiary education are welcome. However, more progress in reforms to tertiary-level teaching is needed to raise the long-term potential for innovation. Despite the recent reforms, there is still some criticism of supply responses in courses offered by the tertiary sector to changing labour market demands. For innovation these weaknesses risk that any take-off in research industries will get stifled by shortages of suitably qualified graduates. Further reform efforts should include:

- *The government should try again to introduce greater consultation between the tertiary sector and business on the content and mix of courses.*

- More pressure is needed for the tertiary education system to shift more quickly out of areas of excess supply. *In this regard the government should consider making greater use of incentives in tertiary-education funding to encourage changes in the allocation of teaching resources.*

- *In vocational education, stronger supply responses to changing labour market demands are also needed. In particular, practical training, consultation and cooperation with the business sector should be strengthened.*

Long-term innovation capacity would also be helped by reform to compulsory education

In compulsory education the authorities recently took welcome steps to improve quality, notably with the introduction of output measures of student and school performance as well as teaching of ICT and language skills. *However, the authorities should take stock of the current system of segregating secondary-school students into vocational and academic streams.* The system has a tendency to misallocate students and the division into vocational and academic streams is anyway less useful in the context of providing skills for modern labour markets. *In addition, the teaching profession needs a better alignment of teacher education, career incentives, professional development and school needs. Excessive job protection needs to be addressed as it is undermining motivation.* It is also limiting scope for redundancy plans to bring down the number of teachers to match falling student numbers and rejuvenate the profession through larger graduate intakes. *Pay structures also need reform;* though teachers, along with other public servants, have got large pay increases over the past couple of years, the salary structure overly rewards senior teachers and performance-related pay components remain low. Also, the recent pay increases are unlikely to have dissuaded a common practise of teachers holding second jobs, a situation that is likely to detract from skill development and focus in the teaching profession.

1. CHALLENGES IN MAINTAINING A FAST PACE OF GROWTH

This first chapter of the OECD's Economic Survey for Hungary looks at the main policy challenges in maintaining a fast pace of growth and introduces the issues tackled in the chapters that follow. Hungary's growth over the past decade has been reasonably strong, though in the early 2000s it was driven too much by fiscally induced domestic demand growth. However 2004's performance has seen a welcome shift back to investment and export led growth. There are four key policy challenges if this healthy pace of growth is to be maintained: i) there has to be a smooth entry to the euro area; ii) further work is needed in building sustainability in public spending, this Survey looks in depth at reform of the health care system; iii) further policy efforts are required to raise employment potential so as to increase Hungary's relatively low labour utilisation; and iv) more work is needed on creating the right environment of business regulation and support, this Survey looks specifically at the government's recently increased focus on innovation.

The current centre-left coalition government has ambitious goals in economic policy (Box 1.1). Entry to the euro area is planned for 2010 and this will notably require further reduction in the Maastricht-defined government deficit. Among the various goals in structural reforms to public services, there is the intention to reform health care with a view to strengthening sustainability in terms of costs, improving service levels and health status. In addition there are efforts to raise labour utilisation through reducing the tax wedge on labour and by reforms to welfare schemes. There are also ongoing efforts to make the business environment more attractive through both general and targeted measures. Notably the government has placed a high priority on encouraging innovation and this Survey takes an in-depth look at the issues and policies involved. In spring 2005 wide ranging structural reform measures were proposed, entitled the Hundred Steps programme (Box 1.2).

Box 1.1. **The political situation**

The most recent parliamentary election was held in 2002 and the incumbent centre-right coalition, led by the Young Democratic Alliance (FIDESZ-MPSZ), was replaced by a centre-left coalition of the Hungarian Socialist Party (MSZP) and the Alliance of Free Democrats (SZDSZ). As with the previous government, the parliamentary majority is small.

The broad economic policy priorities of the government are fiscal consolidation and competitiveness. Its stated intentions are that these goals should be achieved through a smaller and more efficient bureaucracy, greater involvement of the private sector in providing public services and through more stable and simpler legal and administrative frameworks. Slow progress on some of the major structural reforms has much to do with the small majority of the coalition, and the consequent frequent need for opposition support to get measures through. Also some political analysts argue that strong politicisation of senior appointments outside government is an important consideration.

The next general election is scheduled to take place in 2006. Indicators suggest it will be a close-run race between the two coalition groups. In the EU parliamentary elections of last year the opposition obtained more mandates, demonstrating the delicate position of the government and opinion polls show narrow margins between the main contenders. Up-to-now every government since the breakdown of Communism has served a full term, but no government has been re-elected while being in office. Fiscal balances indicate a strong political business cycle, which seemingly fails to make an important difference to the chances of re-election and contributes to the fiscal challenges of incoming governments.

Box 1.2. **The Hundred Steps programme**

In April 2005 the government began to announce a large number of structural reform measures --- collectively called the Hundred Steps programme. By end-June several groups of measures had been announced covering health care, family support, employment, vocational training and taxation while some addition groups of measures had yet to be announced. Though the proposed steps do not amount to major reform in any of these areas, many of them represent important adjustments to existing systems.

Initial assessment of the Hundred Steps programme suggests many of the proposed measures are positive moves and in line with OECD recommendations. In particular among the measures announced by June 2005, those aimed at increasing flexibility and cost containment in health care and measures to reduce grey-sector employment are notably welcome. At the same time however, there are some uncertainties in the programme. The initial announcement of the steps has not been very detailed and as a result, the fiscal implications are as yet unclear. This also means that it is not yet possible at this stage to make a definitive assessment of many of the steps. Finally, particularly because some measures require parliamentary approval, there is a chance that some steps will not get implemented.

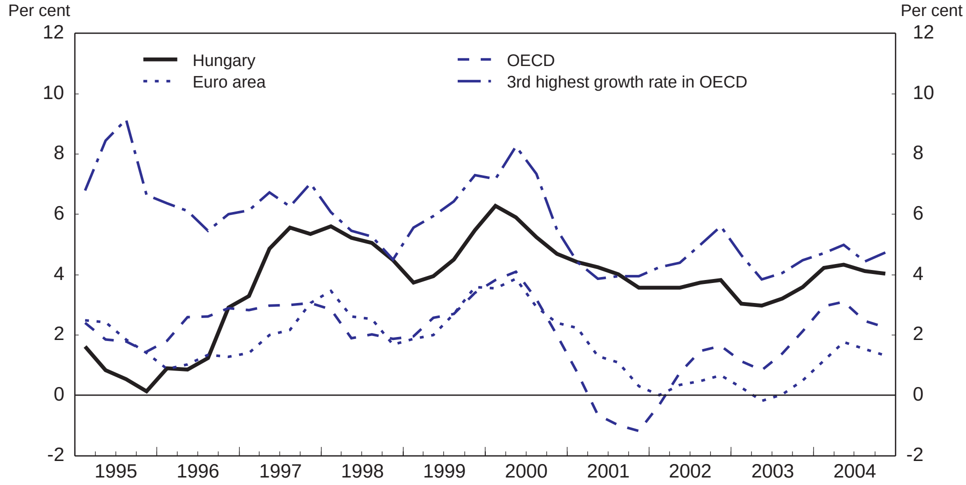
This chapter first looks at the past growth record and the processes needed for a strong pace of real convergence with other OECD countries. This is followed by an introduction to the main policy challenges in entry to the euro area, health care reform, labour utilisation and innovation – these topics are followed up by assessment of policies in Chapters 2 to 5. This Chapter ends with a brief look at the progress on environmental aspects of sustainable development. A summary of recommendations carried forward from previous *Surveys* and recent policy actions is shown in Annex 1.A1.

Long-term growth hinges on successful evolution of the business sector

Hungary's long-term growth record is reasonably good. Since 1997, quarterly year-on-year growth rates in GDP per capita have typically been at least 4% and often among the highest in the OECD (Figure 1.1). However GDP per capita still has a long way to go before catching up with average levels in the OECD region. For example, the latest available Eurostat figures project GDP per capita will reach 62% of the average across the European Union in 2005. Given this, and assuming a 2-percentage-point margin on growth in the EU-25, it would nevertheless take about 25 years for Hungarian GDP per capita to reach the EU average.[1] Simple growth accounting implies that a reasonable amount of catch-up can, in theory, come from increased labour utilisation (see below). However the rest has to come from increased labour productivity through deepening of physical and human capital.

Figure 1.1. **Growth in GDP per capita**

Year-on-year percentage change



Source: OECD Economic Outlook, No. 77 Database.

Manufactured export growth has picked up over the past year or so and projections for this year and 2006 suggest growth will remain strong. Hungary was one of the first of the central and eastern European countries to successfully market itself as a production platform in manufacturing and the economy's role in European production chains has involved significant inward investment and resulted in large trade volumes.[2] Indeed, this process has been a key element in Hungary's long-term growth performance since the mid 1990s. In the early 2000s, weaker trade growth and strong fiscal stimulus meant a shift in the composition of growth away from exports and investment and growth was driven essentially by domestic consumption. But there was a welcome move back to export and investment led growth in 2004 and projections suggest this healthier composition of growth will continue for at least the next year or so. The latest OECD projections see growth of 3.5 and 4% in GDP for 2005 and 2006 respectively (see Table 1.1).

However, strong growth in manufactured exports is by no means guaranteed for the long run and growth hinges on the successful evolution of not only manufacturing but also services. International competition for the location of manufacturing plants is likely to remain intense because of further expansion of production facilities in Asia and continuing strong competition from other countries in central and eastern Europe. If manufactured exports are to continue to play an important role in growth, Hungarian manufacturing has to continue moving up the value-added chain through increasingly capital intensive activities. Indeed, some of Hungary's more labour intensive industries have already largely moved on to other locations and total manufacturing employment has been steadily falling since the early 2000s. With labour resources released from the manufacturing sector adding to already large labour reserves, the service sector has to be the main source of new jobs.[3] And, as in manufacturing, this sector has to move up the value-added chain through productivity improvements. In many service sectors this is likely to need a process of consolidation in Hungary's often small-scale operations, a relatively large number of which operate in the grey economy.[4]

Table 1.1. **The latest OECD projections for Hungary**[1]

	2001	2002	2003	2004	2005	2006
	Current prices billion HUF	Percentage changes, volume (2000 prices)				
Private consumption	7 857.4	10.3	7.7	3.5	2.5	3.5
Government consumption	3 231.1	5.4	5.7	-1.3	-0.4	0.5
Gross fixed capital formation	3 493.0	9.3	2.5	8.3	4.7	7.8
Final domestic demand	14 581.4	9.0	6.0	3.6	2.5	4.0
Stockbuilding[2]	487.9	-2.9	-1.0	-0.3	0.0	0.0
Total domestic demand	15 069.3	5.5	5.7	3.3	2.5	4.1
Exports of goods and services	10 913.0	3.9	7.8	15.7	11.9	13.1
Imports of goods and services	11 132.5	6.5	11.0	14.0	10.1	13.0
Net exports[2]	- 219.5	-2.0	-2.5	0.5	1.1	-0.4
GDP at market prices	14 849.8	3.5	2.9	4.0	3.6	3.9
GDP deflator	_	8.9	6.8	4.7	4.4	3.9
Memorandum items						
Consumer price index	_	5.2	4.7	6.8	3.8	3.8
Private consumption deflator	_	3.7	4.6	7.6	3.8	3.8
Unemployment rate	_	5.9	5.9	6.2	6.3	6.0
General government financial balance[3, 4]	_	-8.5	-6.2	-4.5	-4.2	-4.1
Current account balance[3]	_	-7.1	-8.8	-8.8	-7.3	-6.4

1. Some historic data in this table are slightly different from those in the *OECD Economic Outlook*, No. 77 (Spring 2005) due to data revisions following finalisation of the *Outlook*.

2. Contributions to changes in real GDP (percentage of real GDP in previous year); actual amount in the first column.

3. As a percentage of GDP.

4. ESA95 accounts provided by the Ministry of Finance for 2001-03.

Source: OECD Economic Outlook, No. 77 Database, Ministry of Finance.

There are clearly some important external factors to the successful long-run evolution of the business sector. The close correlation in growth with the euro area over the past few years (Figure 1.1) demonstrates the importance of demand developments in the European Union. Even though business links outside the European Union are reportedly strengthening, notably those with economies in eastern and southern Europe, EU-growth is likely to remain a key determinant of growth.

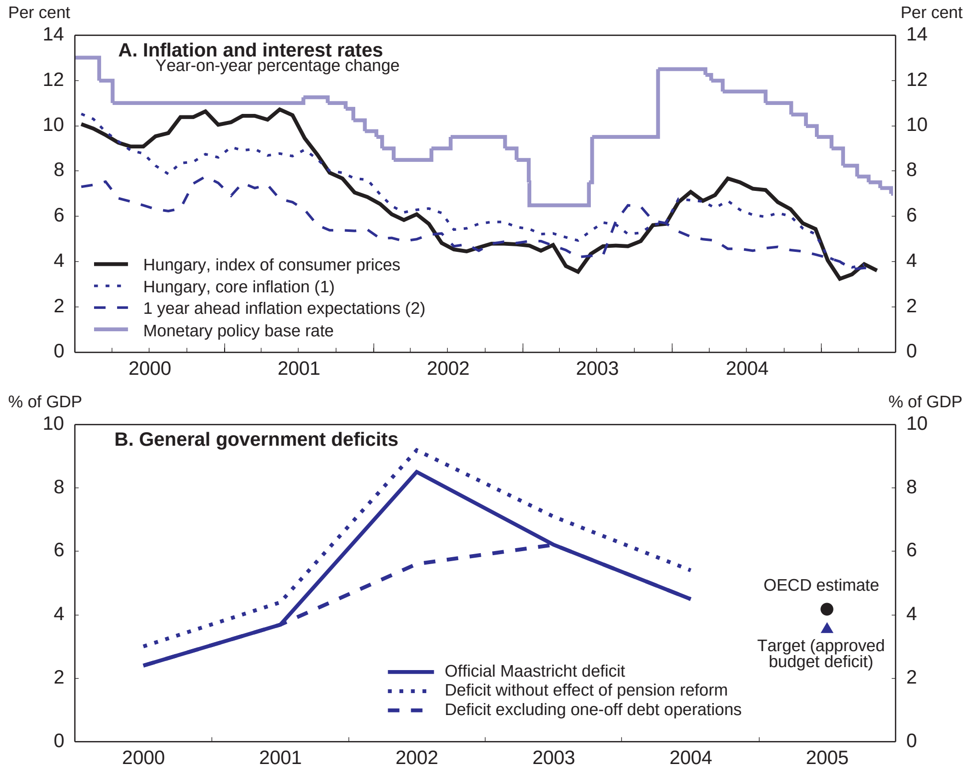
Main policy challenges

Entrenching macroeconomic stability and ensuring smooth entry to the euro area

A smooth entry to the euro area is important for Hungary's medium and long-term growth prospects. For the medium term, the Maastricht criteria have to be met without undue sacrifices in output growth and preferably without involving delay in the government's target entry date of 2010. Membership of the euro area should provide gains in long-run growth potential because of the removal of a very large share of exchange-rate risk in trading activities, increased transparency in price and cost comparisons and perhaps most powerfully because of lower real interest rates. As a result, being in the euro area should further deepen trade and capital market links with the European Union. Membership will also provide an anchor to domestic inflation.

At first glance, recent inflation outcomes and the latest update of Maastricht-defined government deficits suggest Hungary is well on track to reaching the criteria in time for euro entry in 2010 (Figure 1.2). Though headline inflation roughly doubled between mid-2003 and mid-2004, peaking close to 8% in monthly data, underlying inflation increased by less than this and the headline rate has itself since fallen to levels not far off those needed to fulfil the entry criteria. Indeed, in the first quarter of 2005 inflation fell below 4% year-on-year. There has also apparently been good progress in bringing the deficit towards the 3% required by the Maastricht criteria. Since the present government came into office in 2002 the current Maastricht figures show the deficit has been brought down from over 8% to 4.5% of GDP in 2004, and is therefore only 1½ percentage points above that needed for euro entry.

Figure 1.2. **Inflation, interest rates and government deficit outcomes**



1. Index of consumer prices excluding energy, food, alcohol and tobacco.

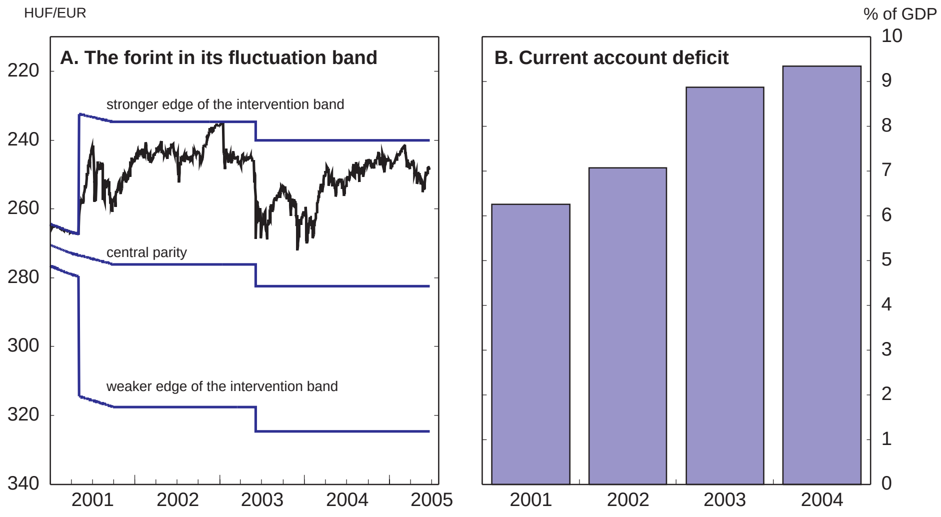
Source: Ministry of Finance and OECD Economic Outlook, No. 77 Database.

However, behind these inflation and deficit outcomes lie vulnerabilities in the macroeconomic environment. The containment of inflation has been achieved at the cost of high interest rates, reflecting large risk premia on forint-denominated assets. The risk premia are partly explained by uncertainties in monetary conditions and underscore the challenges for monetary policy but also reflect perceptions on progress in fiscal consolidation:

- Monetary policy has to strike a difficult balance between the risk of failing to reach entry criteria and the risk of creating monetary conditions that unnecessarily damp growth and make fiscal consolidation more difficult. In addition, the Central Bank's inflation targeting regime is bounded by an exchange-rate band, which adds additional complications to policymaking. The risk of difficult compromises between reaching inflation goals while remaining within the band is amplified by nervousness in exchange-rate markets because of the high current account deficit and because of market sensitivity to signals about future developments (Figure 1.3).

- Perceived progress on fiscal consolidation feeds through to interest-rate risk premia because the government deficit, directly and indirectly, accounts for a large share of Hungary's current account deficit. The markets' concerns are well founded as the amount of "genuine" fiscal consolidation that has been achieved is obscured in the Maastricht deficit numbers by several one-off items and special factors. Once these are taken into account the deficit reduction since 2002 amounts to about 1 percentage point of GDP (Figure 1.2). Given this, fiscal policy looks likely to face a harder job in reaching the Maastricht deficit criteria than appears from the headline figures. Furthermore, the amount of deficit reduction needed is in fact more than 1½ percentage points. Achieving targets beyond 2005 will have to take into account that from 2007 onwards adjustments relating to compulsory private pensions can no longer be included in the headline Maastricht deficit, though the net cost of the pension reform shall be also partially taken into account for the decision of the Council of the EU on the abrogation of the excessive deficit, if the deficit has declined substantially and continuously and has reached a level that comes close to the reference value.

Figure 1.3. **Developments in the exchange rate and current account balance**



Source: OECD; National Bank of Hungary.

Sustainable fiscal consolidation is indeed particularly difficult in the Hungarian context because there are no significant avenues to raise more revenue without encountering deleterious side-effects for the economy. Given concerns about competitiveness in attracting inward investment there are understandable motivations for making corporate taxation attractive for businesses. This has been achieved in part by pushing tax burdens up elsewhere, and this notably has contributed to Hungary's high tax wedges on labour. One problem with this strategy is that, though corporate taxation is reduced, it is a contributory factor to low employment rates (see below). All-in-all this means that deficit reductions have to come mainly from economies on the spending side. In part this requires tough discipline in budgeting; recent measures on this front are reviewed in Chapter 2.

Building sustainability in public spending: health care reform

Economies in public spending need to be backed up by structural reforms to public services that re-define service commitments and re-organise systems towards more efficient provision. Without reform there may be increased risks that the quality, adequacy and effectiveness of services worsen further or that public-service providers force a breakdown of spending rules (or find ways around them).

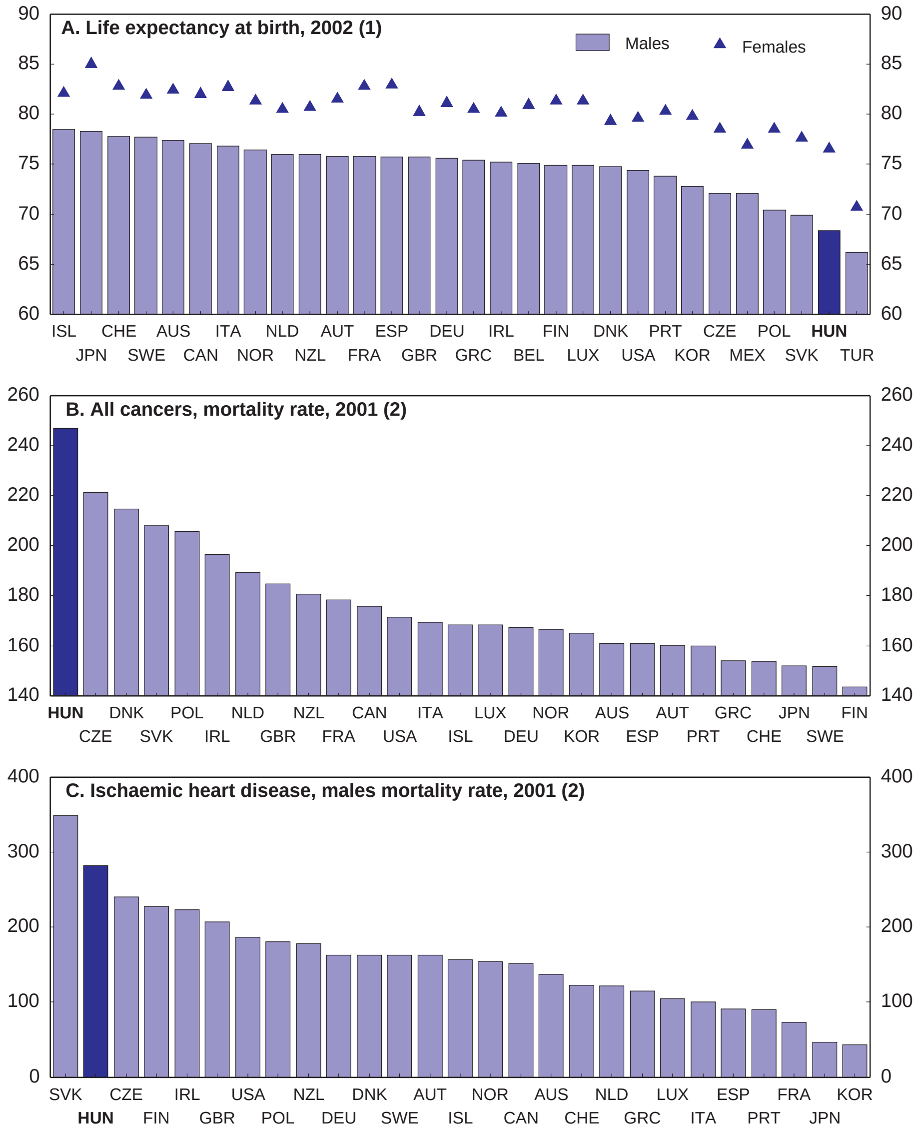
The demand for health care is likely to rise significantly in coming decades in a population that already places heavy demands on the health system. As in many other OECD countries, demand pressures on the health care system are set to rise due to population ageing. In the case of Hungary, relatively rapid growth in GDP per capita is also likely to bring strong demand growth through income effects. As elsewhere, both demand and costs in health care are likely to be further fuelled by new drugs and treatment options. In addition, along with other countries in the region, Hungary's population has low life expectancy, particularly among men. This relates to very high mortality in illnesses that require extensive medical treatment, notably cancer and heart disease, placing relatively high demands on health care services compared with many other OECD services (Figure 1.4).[5] Though the incidence of these diseases is falling, and life expectancy is rising, these additional pressures on health are likely to remain for some time to come.

Problems in the health system have not, as yet, emerged in worryingly high health spending. The OECD's *Health at a Glance* indicators show that total spending on health care is a little below 8% of GDP. In most OECD countries health spending ranges between 7 and 10% of GDP and so Hungarian expenditure is middle ranking (Figure 1.5). There are however significant problems in the efficiency of the system. Most notably, as described in Chapter 3, there are major problems in hospital care. While substantial reform measures have been taken over the past decade, the results in terms of improved hospital efficiency have so far been disappointing. Indeed, incentives and capacities to re-structure service provision remain inadequate. In addition, there has been slow progress in preventing uneconomic access to hospital services: the use of outpatient alternatives to bed-based treatment is not fully exploited and access to hospital specialists remains relatively easy. Another key problem is high spending on drugs. Although spending on drugs per capita is low in international comparison, it represents a high share of total spending on health and there are inadequate mechanisms to curtail unnecessary prescriptions and insufficient encouragement to use low cost drug treatments.

Raising employment potential

Labour-force statistics suggest there is substantial room for increasing Hungary's employment potential. There has been a welcome increase in the employment rate in recent years, but it has been fairly small and the rate remains close to the bottom of OECD rankings (Figure 1.6). Furthermore the unemployment rate is also relatively low (currently around 6%), implying that a high percentage of the non-employed are not actively seeking work. OECD calculations suggest the employment rate is far below benchmarks based on countries with high labour utilisation (Figure 1.6). Though these benchmarks are ambitious and could only conceivably be reached over the longer term, they nevertheless illustrate that there is room for significant increases in employment rates. Raising the employment rate is desirable not only from a growth perspective: having such large numbers of people either inactive or engaged in undeclared activities increases income inequality and arguably damages social cohesion.

Figure 1.4. **Health outcomes in Hungary**



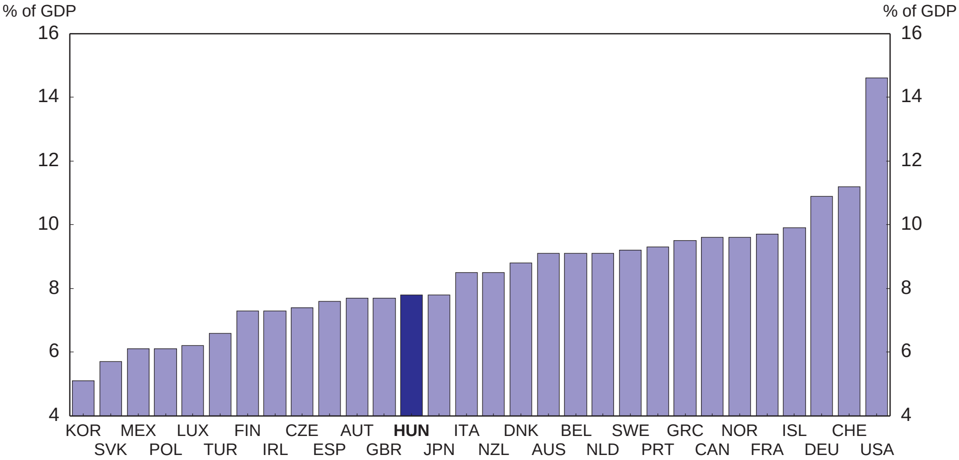
1. 2001 for Canada, Germany, Korea, New Zealand, United Kingdom and Unites States.

2. Deaths for 100 000. 2 000 for Canada, Iceland, Ireland, Italy, Japan, Netherlands, New Zealand, Portugal, Spain, Switzerland and Unites States, 1999 for France, Denmark, Greece and United Kingdom.

Source: OECD, Health data (2004), 3rd edition.

Figure 1.5. **International comparison of health spending**

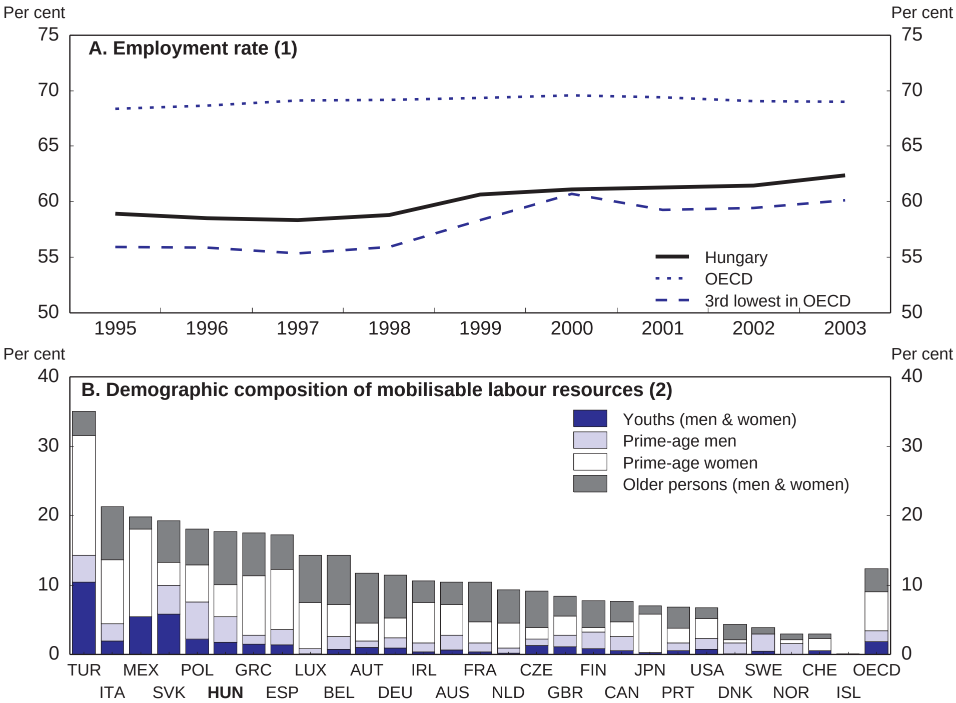
2002[1]



1. 2000 for Turkey, 2001 for Austria and Japan.

Source: OECD, Health data (2004), 3rd edition; *OECD Economic Outlook,* No. 77.

Figure 1.6. **Indicators of labour utilisation**



1. Persons aged 20-64 years.

2. Mobilisable labour resources are shown as the vertical sum of excess unemployment and excess inactivity. Excess unemployment is defined as unemployment above 5% of the labour force (if any). Excess inactivity is based on comparisons between actual participation rates for cells defined by age and gender, and international benchmark rates (calculated as the third highest value observed in the OECD).

Source: OECD, Employment database; *OECD Employment Outlook* (2003).

Assessment of the economy's capacity for additional labour utilisation has to be nuanced because Hungary has a fairly large grey sector.[6] As a result, actual activity is almost certainly higher than that implied by the labour force survey; quite a large number of the non-employed recorded in surveys are likely to in fact be working. Though this to some extent dilutes the gravity of the labour-utilisation problem, grey-sector activity is nevertheless a cause for concern. The grey sector is in part the result of high taxes and social costs on labour but the resulting narrowing of the base requires higher rates than otherwise. Grey activity also reflects opportunities to combine welfare income with undeclared earnings, thus complicating policymaking in improving tax-benefit incentives. In addition the typically small scale of grey sector activities is hampering specialisation and investment in human capital.

Strong regional elements in the process of economic development have contributed to the problem of low labour utilisation and are also an important consideration in finding solutions to it. The growth process has meant severe contraction in many activities, with the east of the country being particularly hard hit, while rapidly growing activities have been concentrated in the centre and west of the country. As a result, many of those laid off from declining industries have been deterred from active job search, not only because they find their skills have little market value but also because getting a job would mean moving house. The strong regional differences in growth combined with limited labour mobility have therefore resulted in wide regional differences in employment and unemployment rates; for instance, the employment rates across the seven main administrative regions range from a little over 50% to 65%.[7]

At the same time, in a number of respects the labour market works well. In particular, OECD indicators suggest the regulatory environment is not generally obstructing the operation of the market, for instance via overly strong employment protection legislation.[8] However there are specific issues. For example, the market for part-time work remains under-developed, though this situation may change in light of some recent measures (see Chapter 4). Also, although wages are largely set by market forces at the company level, there have in the past been some disruptively large increases in the minimum wage and in public-sector salaries. However recently there has been welcome constraint in this area. The present government has intentions to strengthen sector-level wage agreements but as yet there has not been much action on this front and these moves do not appear intended to strongly restrict flexibility in firm-level bargaining anyway.

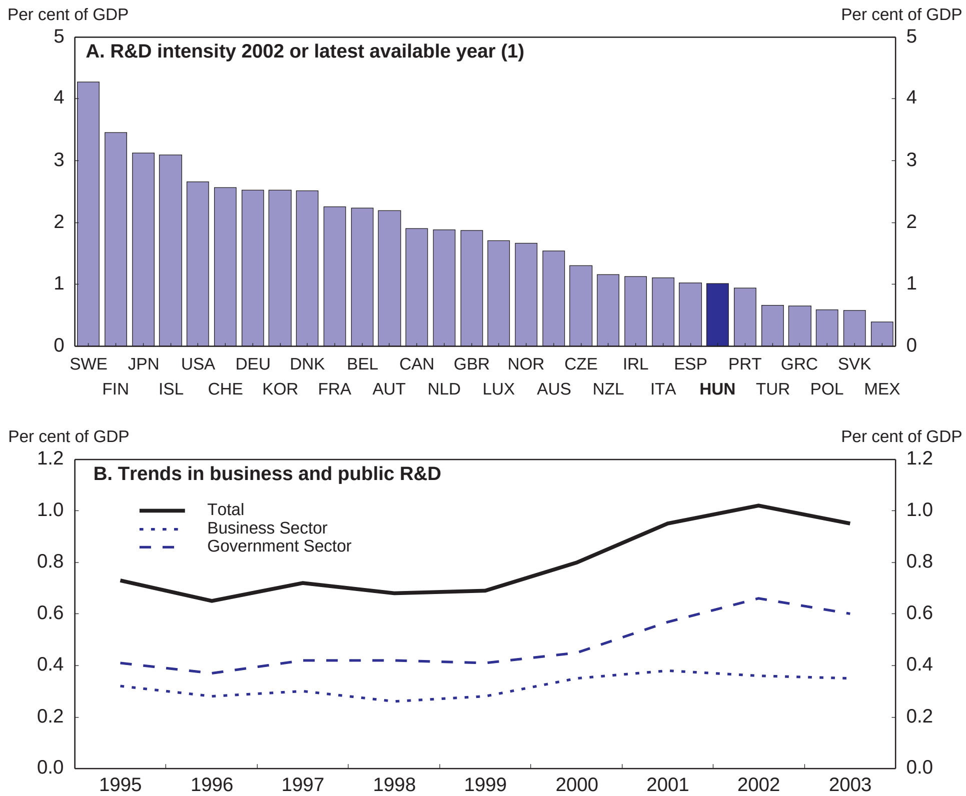
Chapter 4 of this *Survey* focuses on policies aimed at increasing the employment rate through tax and welfare reform. Despite some cuts in the past, the tax wedge on labour is still very high. One reason why larger cuts have not been made in the past is because substantial revenue losses could not be afforded; such constraints will continue unless faster progress on fiscal consolidation can be made. Nevertheless, the government has been able to take some measures and plans more in upcoming tax reform. There are also issues in the welfare system. In particular, large inflows to disability benefit and early retirement schemes mean that many of the non-employed have permanently exited the labour force.

Improving business regulation and support: innovation policy

The government's focus on innovation is part of a wider campaign of general and targeted measures in corporate taxation and business support. For example a cut in the corporate income tax rate from 18% to 16% was made in 2004, and currently there are proposals to abolish local business taxation. Other measures have included the introduction of a simplified taxation system for small enterprises. At the same time, however, EU membership has meant curtailment of some targeted measures. In particular, the Hungarian authorities have agreed to phase out the system of granting tax holidays to firms that make investments over a certain size.

In international comparison, the overall level of innovative activity in Hungary is relatively low and is not strongly business oriented. Though total R&D activity has increased in recent years, it is nevertheless equivalent to only about 1% of GDP. Quite a number of OECD countries have at least twice this level of activity (Figure 1.7). Furthermore, the share of R&D conducted by business enterprises is also very low (Figure 1.8), suggesting that a lot of the research being carried out is not aimed at developing products and processes that have potential for commercial application. Indeed, there are only about 700 private-sector research units in the whole economy according to data collected by the Central Statistical Office. The low level of innovative activity compared with many other OECD countries is confirmed in a wide range of other indicators (Table 1.2).[9]

Figure 1.7. **Gross domestic expenditure on R&D**



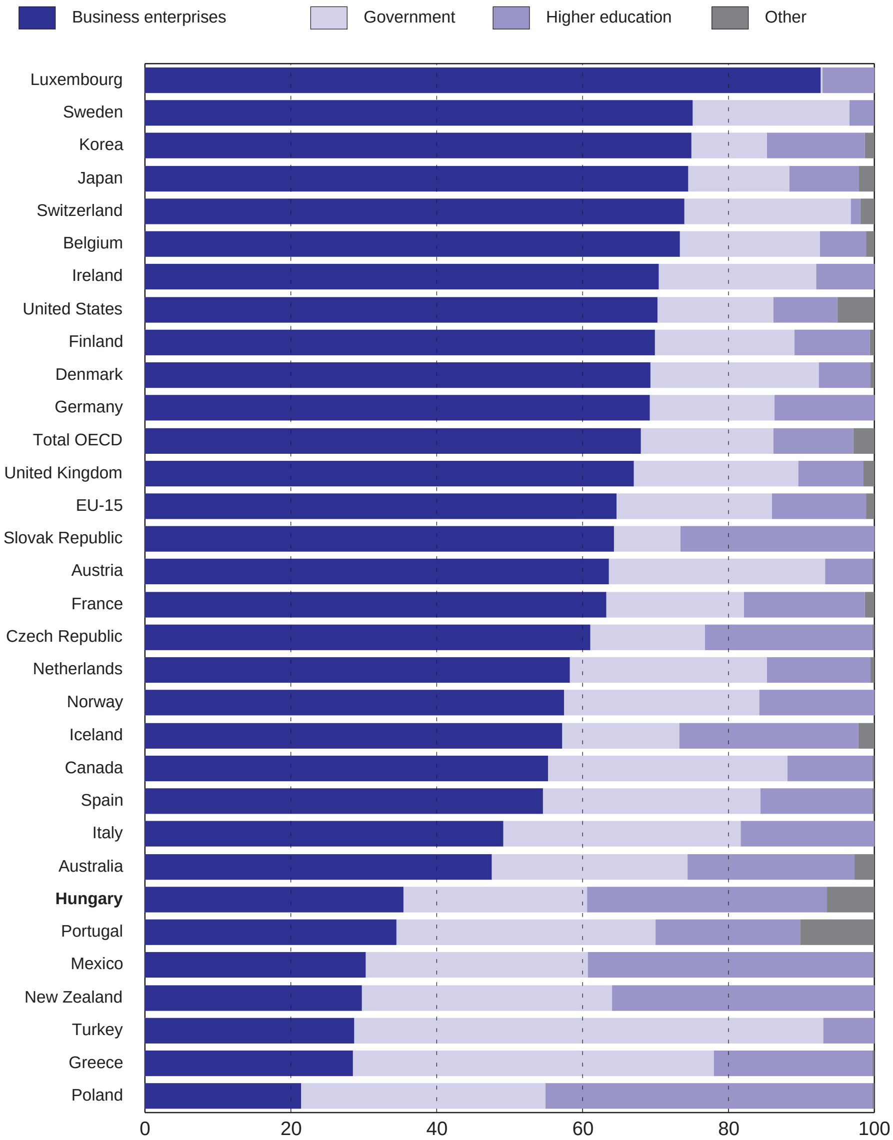
1. 2000 for Australia, Luxembourg and Switzerland; 2001 for Greece, Ireland, Italy, Mexico, Netherlands, Sweden.

Source: OECD, Main Science and Technology indicators.

The agenda for innovation policy is however rather more complicated than the indicators of innovation activity suggest. Hungary's low level of innovation in part reflects the structure of the economy.[10] In terms of business R&D, a lot of high-tech production is by subsidiaries of large international firms who carry out their main R&D activity elsewhere. In addition, many domestic manufacturing firms operate on a relatively small scale, often probably too small to warrant formal R&D activities. Though these firms may indeed be innovative, and may benefit from spillovers in knowledge and know-how from the large high-tech producers, these processes probably do not get fully recorded in statistics on innovative activity. These aspects of the economy not only explain, in part, why domestic R&D activity is low but also imply that the diffusion of technologies coming from outside Hungary is relatively important. Differences between Hungary's structure of production and those in other countries also suggests that using cross-country comparisons as a guide to policy goals in the level of R&D could be misleading. Indeed, as Chapter 5 points out, all countries face difficult problems assessing if innovative activity is indeed too low, and if so how much, and in what form, additional public support for innovative activity is needed.

Figure 1.8. **R&D expenditures by performing sector**

Percentage share in national total, 2002[1]



1. 1998 for Austria, 1999 for Greece, New Zealand and Sweden, 2000 for Australia and Luxembourg, 2001 for Ireland, Italy, Mexico and Netherlands.

Source: OECD, Main Science and Technology Indicators database.

Table 1.2. **Broad indicators of innovation activity**

	Hungary	OECD average
Total R&D spending as a % of GDP	0.95	2.28
of which:		
business	0.35	1.53
government	0.30	0.25
higher education	0.25	0.40
Total researchers per 1 000 total employment	3.8	6.5
Number of patent applications to EPO in the ratio of GDP on PPP (2001)	0.6	3.3
Share of high technology industries in manufacturing exports (2003)	32	25
Scientific publications per million population (1999)	191	402
Investment in venture capital as a % of GDP (1998-2001)		
early stages	0.01	0.04
expansion	0.04	0.09

1. Latest available year of data.

Source: OECD, Main Science and Technology Indicators database.

Environmental issues

Though good progress is being made in environmental outcomes, the Hungarian authorities recognise that the overall strategy and co-ordination in policy needs strengthening and are working on a formal sustainable development plan. The 2004 *Survey* took an in-depth look at policies on climate change and air pollution as part of a review on sustainable development. This *Survey* reviews recent progress on these topics and also takes a brief look at policies in water management.

Air quality has improved since the early 1990s but is nevertheless not yet up to the standards seen in many other OECD countries. Goals for further improvement have been set by commitment to the United Nation's Convention on Long-Range Transboundary Air Pollution and EU standards on emissions. In particular, an EU directive on Large Combustion Plants that requires more stringent emission limits as well as better enforcement by the responsible authorities is playing a key role in setting the policy agenda. The authorities are however using market-based solutions in other areas of air pollution. Notably, the annual car tax is set according to vehicle emission characteristics and in 2004 an environmental load charge has been introduced on some air pollutants.

Hungary is likely to attain its Kyoto targets for greenhouse gas emissions. However, as detailed in the 2004 *Survey*, the planned expansion of renewable energy to reach targets set under agreement with the European Commission is likely to imply high abatement costs in terms of saved carbon. Containment of greenhouse gas emissions is also envisaged from the introduction of the EU's emission allowance trading scheme. In setting up the scheme, as elsewhere in the EU, 95% of the allowances have to be allocated to current emitters free-of-charge, and national governments are free to decide on how to allocate the remainder.[11] The Hungarian authorities' plan to allocate some of the remaining allowances by auction is welcome. This will allow markets to decide on the initial allocation of allowances and will also raise some revenue for the government. On-going liberalisation of energy prices is also contributing to more economic use of energy resources. Further liberalisation of prices for businesses was made in 2004. Nevertheless full liberalisation is some way off; under the schedule specified in EU directives, Hungary does not have to lift price regulation that keeps prices below market rates for households until 2007.

The provision of water services (water supply, sewerage and waste water treatment) presents a number of specific environmental and fiscal challenges for Hungary.[12] The country has a rather unique hydrography, notably its large per-capita surface water runoff mostly comes via its largely transboundary river system. The volume of surface water resources nearby the main watercourses is generally sufficient for the provision of water services, but the fact that a very large majority of them come from upstream countries presents particular challenges. Large amounts of transiting surface waters result in vulnerability to damaging floods. On this front, a new approach to tackling floods that focuses on using designated spill-over areas in combination with the existing – largest in Europe – system of protecting embankments, looks set to be both less costly and more friendly to the environment. At the same time, local runoff of the flood-prone territories (notably in the eastern part of the country) can be very scarce and severe droughts are becoming more frequent. Also relating to surface water, the quality of water before it is treated for use cannot easily be controlled; most of the supply comes from shared watersheds that are intensively used, and sometimes for activities (notably mining) where low environmental performance standards are sometimes applied.

The authorities have been improving the management of water resources. Until 2002 management was divided between the Ministry of Transport and Water whose responsibilities focussed on water services and the Ministry of the Environment whose responsibilities focussed on certain quality issues, such as pollution levels in rivers. Under the current government, both aspects of water management became the responsibility of the Ministry of Environment and Water and this should bring welcome integration of water policies. Nevertheless, major challenges lie in the implementation of wastewater treatment programmes. Improving waste water treatment in large cities is high on the authorities' agenda but there are also issues in making sure waste water treatment is carried out economically in small municipalities as incentives do not always encourage the efficient pooling of resources.

The quality of groundwater (the main source of drinking water) in many regions is reduced by a combination of various factors, notably inappropriate fertiliser use, atmospheric deposition and illegal or poorly constructed landfills. Better surveys of water quality are needed that have more point measurement, particularly to help detect the impact and source of polluting agents present in the subsurface.

Notes

1. Eurostat PPP based comparisons of GDP per capita published in June 2005 project Hungary's GDP per capita will reach 61.9% of the average across EU-25 in 2005. The equivalent figures for the Czech Republic, Poland and Slovakia are 72.6%, 47.9% and 53.6% respectively.

2. An OECD perspective on the role of foreign direct investment (FDI) in development can be seen in OECD (2002a). For recent discussion about FDI flows in Hungary see EIB (2004a). The importance of specific manufacturing sectors for Hungary's growth was illustrated in the previous *Survey* (OECD, 2004a). General perspectives on global manufacturing production and the internationalisation of capital and investment flows can be found in EIB (2004b) and Deloitte (2003). In addition, the Hungarian Ministry of Finance produced an interesting series of papers on competitiveness in 2004 (Ministry of Finance, 2004).

3. Trends in manufacturing, private-sector services and public-sector employment are illustrated in the Central Bank's quarterly inflation report of February 2005 (MNB, 2005). The service-sector was the focus of an OECD Ministerial meeting in spring 2005; see OECD (2005a).

4. Hungary's relatively small-scale of businesses is illustrated in international comparisons of firm size in recent OECD assessment of small-and-medium enterprise (OECD, 2005b). For example, data for 2002 show that the share of employment in manufacturing firms with one to nine employees is about 15% in Hungary, though this is lower than a few other countries (*e.g.* Italy) it is above most OECD countries where the share is typically 10% or less. Comparisons of firm size for some selected service sectors are made by the OECD but as yet Hungary is not included in them.

5. For further comparisons of health outcomes and health systems see OECD (2003a).

6. Estimates of grey sector and other areas of non-observed economic activity are inevitably bounded by wide confidence intervals and depend on method as well as what is being measured. For example, the United Nations figures show Hungary has non-observed activities equivalent to about 15% of GDP, while IMF estimates put the size of the shadow economy as equivalent to over 25% of measured GDP (see OECD, 2002b). One of the most common forms of grey-sector activity is a practice of hiring people officially at low wage rates and then topping up wages with unreported payments.

7. The latest available figures show employment rates of those aged 15 to 64 in Central Hungary, Central Transdanubia and West Hungary to be in the range 60 to 65%. Southern Transdanubia has an employment rate of about 55% while the three remaining regions have rates only a little over 50%. For a detailed overview of regional issues in Hungary see OECD (2001).

8. For recent comparisons of indicators of labour market regulation and cross-county assessment of labour market policies see OECD (2004b). In terms of employment-protection legislation for both permanent and temporary contracts, Hungary ranks below average according to the latest OECD indicators. There has been some adjustment of labour regulation in recent years. For example in 2003 stricter regulations on the renewal of temporary contracts were introduced. Previously there was no explicit limit to the number of renewals; the new labour code states that a fixed employment contract is deemed as indefinite if it is repeatedly renewed or extended without the employer having legitimate reason to do so.

9. More detailed international comparisons of innovative activity can be seen in OECD (2003b) and in the European Commission's survey-based Innobarometer (European Commission, 2004).

10. An interesting assessment of the process of innovation in Hungary can be found in Borsi (2004).

11. The rules for allocating the emission allowances are laid out in the EU cap-and-trade directive (Directive 87/2003).

12. For a recent cross-country assessment of water policy and other environmental policy issues see OECD (2004c).

BIBLIOGRAPHY

Borsi, B. (2004), “Technological Modernisation, Innovation and Research and Development as Factors of Competitiveness in the Economy of Hungary”, Ministry of Finance, *Working Paper*, No. 6, 2004.

Deloitte (2003), *Mastering Complexity in Global Manufacturing*, Deloitte Research Global Manufacturing Study.

European Commission (2004), *Innobarometer 2004*.

EIB (2004a), *The Internationalisation of Production in Europe: Case Studies of Foreign Direct Investment in Old and New EU Member States,* European Investment Bank Papers, Vol. 9, No. 2.

EIB (2004b), *The Internationalisation of Production in Europe: Causes and Effects of Foreign Direct Investment and Non-equity Forms of International Production,* European Investment Bank Papers, Vol. 9, No. 1.

Ministry of Finance (2004), *Economic Competitiveness: Recent Trends and Options for State Intervention*, Budapest.

MNB (2005), *Quarterly Report on Inflation*, February 2005, Magyar Nemzeti Bank.

OECD (2001), OECD *Territorial Reviews, Hungary*, OECD, Paris.

OECD (2002a), *Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs*, OECD, Paris.

OECD (2002b), *Statistics Brief: Measuring the Non-observed Economy*, OECD, Paris.

OECD (2003a), *Health at a Glance*, OECD, Paris.

OECD (2003b), *OECD Science, Technology and Industry Scoreboard*, OECD, Paris.

OECD (2004a), *OECD Economic Surveys: Hungary*, Vol. 2004/2, OECD, Paris.

OECD (2004b), “Assessing the OECD Jobs Strategy: Past Developments and Reforms”, internal OECD document.

OECD (2004c), OECD *Environmental Strategy: 2004 Review of Progress*, OECD, Paris.

OECD (2005a), *Growth in Services: Fostering Employment, Productivity and Innovation*, OECD, Paris.

OECD (2005b), *SME Outlook*, OECD, Paris.

ANNEX 1.A1. TAKING STOCK OF STRUCTURAL REFORMS

This table reviews action taken on recommendations from previous *Surveys*. Recommendations that are new in this *Survey* are listed in the relevant chapter.

Key past recommendations	Significant actions taken since publication of the previous *Survey* (May 2004)
	FISCAL CONSOLIDATION
Budgeting practices	
A more strategic medium-term outlook in budgeting is needed that has better prioritisation among central government programmes and more closely involves local and regional governments.	No concrete new mechanisms have been introduced to tie central government budgeting more strongly to medium-term objectives. However a number of new mechanisms to increase spending discipline over the budget year have been introduced in 2004 and 2005. No significant action has been taken to improve budgeting in local and regional government.
Clarify macroeconomic assumptions used in budgets.	There has been no substantial change in the way the macroeconomic assumptions for the annual state budget are presented. However, there have been improvements in the way the Convergence Programme is presented, compared with its predecessor the Accession programme. However, no action has been taken to open alternative scenarios to public discussion.
Tax strategy	
Aim for greater transparency, neutrality, simplicity and stability in the tax system.	There have been no sweeping improvements and developments are mixed. There have been positive moves, notably the introduction of the simplified tax treatment for small businesses in 2003. At the same time, the introduction of a special temporary tax on banks in 2005, demonstrates continuing recourse to short-term *ad hoc* measures that add complexity and uncertainty for taxpayers.
Further broaden the tax base notably through the introduction of taxes on currently untaxed capital revenues.	No sustainable action – the introduction of taxes on interest income has never gone beyond the planning stage. The special tax on banks arguably broadens the tax base but it is a temporary measure that has been introduced because of exceptional profits helped by subsidies on housing loans.
Continue efforts to improve the efficiency of tax administration and collection.	No action.
Public expenditure	
Make greater use of performance benchmarks in the supply of public services and replace input-orientated financing with output-orientated financing.	Performance benchmarking is not yet widespread but there have been positive developments. For example, in education a new measurement and evaluation system of school and pupil performance has been introduced.
Make tendering for public-sector contracts more competitive, particularly in local and regional government.	No action.
Seek solutions to excessively fragmented public-service provision structures at the municipal level, for example through encouraging more voluntary co-operation or through shifting responsibilities to regional or central level.	No action.
Pensions	
Increase the effective age of retirement by reforming early retirement and by de-emphasising the standard age of retirement.	No action – though previous reforms mean there are ongoing increases in women's retirement age and tighter eligibility criteria for getting early retirement are scheduled to take place in 2009.

TAKING STOCK OF STRUCTURAL REFORMS (*cont.*)

Key past recommendations	Significant actions taken since publication of the previous *Survey* (May 2004)
LABOUR MARKET	
Taxes and benefit	
Continue efforts to reduce the tax wedge on labour.	Introduction of zero tax at the minimum wage via special allowances in 2002 has been followed up in 2005 by tax cuts via changes to the PIT schedule and by opportunities for large rebates on employers social contributions for certain types of workers. Phase out of the lump-sum employer's health contribution continues. The Hundred Steps programme proposes further cuts in employers' social security contributions.
In disability benefit tighten the assessment criteria and make assessment take into account the type of work performed and remaining work capacity.	A new set of guidelines has been distributed which are aimed as a first step towards a system that takes more account of remaining abilities and encourages rehabilitation to the workforce.
Make savings via reductions in family tax credits to help finance general cuts the tax wedge.	Caps on the total amount of tax credits that households can claim have been introduced and this implicitly means some savings on family tax credit. Proposals in the Hundred Steps programme include eliminating allowances for families with one or two children while keeping some allowances for three or more children.
Make childcare support more work oriented by re-balancing it towards forms that increase the supply of affordable childcare and reduce the parental leave period.	No action.
Monitor the new Job Search Allowance.	Detailed monitoring has been carried out; the impact of the scheme has been somewhat disappointing.
Improve levels of employment among the Roma population.	An action plan for the period 2004-06 is being implemented which promotes social inclusion for the Roma and includes new measures in education, training and employment.
Aim to eliminate housing loan subsidies.	The subsidies were significantly scaled back through changes made in 2003 and further cut backs were made in 2004, notably the maximum amount of annual subsidy was cut from HUF 240 000 to HUF 120 000 and the maximum length of subsidy was cut to 5 years.
Wage formation	
Keep increases in the minimum wage low.	The minimum wage increase was 6% in 2004, marginally lower than the average increase in the private sector.
Avoid a "stop-go" approach to public sector pay.	The Minister of Labour proposed striking a two-year wage agreement (covering 2005 and 2006) but the public-sector unions have preferred to continue with year-by-year negotiation.
BUSINESS TAXATION AND SUPPORT SCHEMES	
Reform both the turnover-based local business tax and the non-residential property tax – both have inappropriate bases and add unpopular complexity to Hungary's tax system.	No action – though in 2005 the government has put forward new proposals to eliminate the local turnover-based business tax.
Assess the efficiency of the programmes that increase access to finance for SMEs with a view to elimination or reform.	No action.

Key past recommendations	**Significant actions taken since publication of the previous *Survey* (May 2004)**
	COMPETITION
Competition Legislation and enforcement	
Introduce the right of *individuals* to enforce Hungarian competition law before the courts.	No action.
Increase the power of competition law in deterring hard-core cartels.	Several steps have been taken recently including the introduction of stronger investigative powers and reinforcement of the Competition Authority's cartel unit.
Make procedural reforms in competition law to accelerate decision making (particularly in merger cases) and to allow more flexibility (particularly in cartel investigations).	A distinction between "simplified" and "full procedure" treatment of merger cases has been made that should help speed up many merger cases. Major amendment of the treatment of mergers in the Competition Act is planned in 2005.
Network industries	
Increase the strength and efficiency of the industry regulators. In particular: 1) insulate regulators' decisions on pricing from political and budgetary interference, 2) make decisions based more on market information than technical regulation, and 3) reduce the role of the government in setting network access charges.	No action. Questionnaire replies from some Hungarian authorities suggest these are not considered significant issues.
Phase out price-setting for gas and electricity.	Phase-out continues according to a scheduled worked out with the European Commission for market-based pricing in both household and business markets by mid-2007.
Continue to reduce the size of government shareholdings.	MOL, the previously fully state-owned energy company, was further broken up with the sale of most of its interests in the gas sector to E.ON Ruhrgas.
Electricity. Deepen markets by dismantling long-term contracts and increase connection to the international grid.	A government decree in 2002 obliges renegotiation of existing contracts but the parties concerned have yet to complete any re-negotiation. The parties argue that legal obligations for "security of supply" obstruct renegotiation. Though the market is deepening over time, the Competition Authority thinks that a new market model may be needed to deal more effectively with the problem of long-term purchasing agreements.
Gas. Facilitate the installation of additional storage facilities.	In mid 2005, proposals were being prepared that would increase incentives for market participants to increase gas storage facilities.
Telecoms. Reduce the power of the incumbent, particularly in fixed-line services, through better enforcement of rules on carrier selection, price squeezes and interconnection fees.	A new Act on Electronic Communication was introduced in 2004 that aims to intensify competition between services providers. By mid 2005 the Competition Authority had completed a review of market power and had imposed new obligations on some market players.
Rail services. Make further progress in privatisation and liberalisation.	Several new railway companies have been granted licences since the opening of freight traffic to competition in 2004 and as of mid 2005 four companies were in operation. Interestingly, the Competition Authority is conducting a review of market developments.
Postal services. Make further progress in dealing with over-staffing and non-viable rural post offices	Re-structuring is underway, though progress is rather slow. Privatisation of the incumbent is not planned by the present government and full liberalisation is not scheduled to begin until 2009.
Other industries and sectors	
Retailing. Abandon minimum prices for certain foods.	No action – indeed the present administration says it has no intention of removing them.
Professional services. Reduce entry restrictions and price setting behaviour.	The Competition Authority has recently conducted an overview of the liberal professions and is following this up with bilateral discussions with professional bodies as well as legal proceedings.

TAKING STOCK OF STRUCTURAL REFORMS (*cont.*)

Key past recommendations	**Significant action taken since publication of the previous *Survey* (May 2004)**
ENVIRONMENTAL ISSUES	
Take greater account of the price of emissions permits when deciding on methods of reducing greenhouse-gas emission (particularly renewable energy) are economic.	There has been no significant change in the strategy for reducing greenhouse-gas emissions.
Use more economic instruments to contain air pollution emission.	Several measures in environmental taxation have been introduced, including a change in the annual car tax to reflect emission levels. In addition, an environmental load charge has been introduced for some air pollutants.

2. ENTRENCHING MACROECONOMIC STABILITY AND SMOOTHING ENTRY TO THE EURO AREA

This Chapter discusses the challenges for monetary and fiscal policy given the government's goal of joining the European Monetary Union in 2010. In fiscal policy, the key conclusion is that further reductions in the general government deficit have to come about through spending cuts because of the already high level of taxation. Failure to reach deficit targets have damaged credibility in the recent past and the Chapter discusses ways of providing more realistic budget targets, more transparent fiscal planning, better assessment of progress over the budget year and improved estimation of outcomes. In monetary policy, some fine-tuning of the Central Bank inflation targeting regime to help smooth euro entry is recommended, including setting inflation targets for a fixed number of quarters ahead. The Chapter also stresses that achieving the targets set in the Convergence Programme for joining the euro area will require close co-operation between fiscal and monetary policies.

For the next few years, Hungary will face the challenge of adhering to the monetary and fiscal targets set in the *Convergence Programme* for joining the euro area. While lowering the deficit below the Maastricht criteria and ensuring fiscal sustainability will be important, the backing of monetary policy will also be relevant as a vehicle for macroeconomic stability and strong growth in the long term. The broad challenge facing the Hungarian authorities will be to avoid extra costs for the economy. Establishing a high degree of co-operation between monetary and fiscal policy actors will be crucial in this respect. The target date for entry has already been postponed and fiscal targets have also been missed more than once leading to losses in the credibility of macroeconomic policies. Regaining credibility will be conditional upon achieving the required amount of fiscal consolidation and disinflation in time.

This Chapter first discusses the strategy of the Hungarian authorities in joining the euro area and the challenges involved. It then looks at specific monetary and fiscal policy requirements in directing the course of the economy to the desired objectives. The policy recommendations are summed up in Box 2.1.

Hungary's strategy for euro entry

The strategy of joining the euro area adopted in 2003 by the government in agreement with the Central Bank originally envisaged the adoption of the euro in January 2008. However in 2004 the target date was changed to 2010, which has obviously postponed the critical periods in which macroeconomic conditions will be assessed by the European authorities for entry (Box 2.2). For example, the assessment period for fulfilling the Maastricht criterion on prices would begin at some point in 2008 for entry in 2010. There have also been changes in medium-term fiscal targets laid out in the *Convergence Programme*, the most relevant recent moves being as follows:

- Under the new path to fulfil the fiscal criteria, the general government deficit (Maastricht definition, *i.e.* ESA95 accounts) is set to decline from a projected 5.3% in 2004 to 2.8% in 2008. This compares with 4.8% in 2003 down to 2.5% in 2006 under the old strategy.[1] Broadly equal annual reductions – of 0.6-0.7 percentage points of GDP per year – are now planned, while the 2003 Pre-accession Economic Programme foresaw a more frontloaded reduction of the deficit.

- Contrary to the previous approach, the *Convergence Programme* does not provide an overly concrete timetable for joining ERM II. While past documents hinted that early entry may be advantageous, the *Programme* indicates that a credible and sustainable fiscal adjustment path is a prerequisite for joining ERM II.

The strategy on euro entry continues to pose significant monetary and fiscal policy challenges.[2] Concerning first the monetary framework, meeting inflation targets at the least cost to real output growth is a challenge for monetary policy. Inflationary pressures have eased substantially relative to 2004 when the rises in VAT and excise duties compromised meeting the consumer price inflation target of 3.5 ± 1%. The Central Bank has set targets of 4 and 3.5% (± 1%) for end-2005 and end-2006, respectively and the *Quarterly Report on Inflation* of May 2005 expects significant progress in the reduction of inflationary expectations. Based upon the assumption of unchanged monetary conditions, the *Report* projects 3.3% inflation for December 2005 and 3.2% for end 2006, which implies that inflation, though within the target band, is likely to be well below the centre of it. At 7.0% (as of late June) the base interest rate is still high, although 550 basis points below the peak of November 2003.

Box 2.1. **Policy recommendations for entrenching macroeconomic stability and smoothing entry to the euro area**

In broad terms, consolidating macroeconomic stability and smoothing the strategy for EMU entry requires meeting targets in a climate of shared objectives and close co-operation between fiscal and monetary policies.

Short term policy priorities

- Though the Central Bank cut rates several times in 2004, and has made further cuts so far in 2005, market interest rates remain high. The MNB should continue with its gradual approach to reducing policy rates as long as reaching the targeted amount of disinflation is not in danger.
- There are risks in the government's plans to reach the deficit target with the help of a new public partnership deal for motorway construction. Indeed, the 2005 budget, together with the increase in private infrastructure spending, is in fact expansionary. Slippage from the 2005 deficit target should be avoided.

Medium term policy options

Monetary policy

Some fine tuning of technical aspects of the inflation targeting regime could contribute to a smoother implementation of monetary policy and thereby help towards a successful run up to euro entry:

- Variation in the time lag between Monetary Council decisions and inflation targets in the current inflation targeting regime could be avoided by setting a rolling target, say 6 to 8 quarters ahead. The already existing annual target could be presented as part of the medium-term disinflation path that the policymakers envisage.
- Large changes in the size of the Council weaken confidence in the continuity of the Central Bank's policy. To address this issue the authorities should make sure that when the terms of office of the new four members end, the terms of their successors are appropriately staggered.

Fiscal policy

Failure to reach targets and blurring of deficit outcomes is damaging credibility. In broad terms the authorities need to set more realistic budget objectives and to be more transparent in fiscal planning, assessment of progress over the budget year and in the estimation of outcomes:

- The authorities should use realistic estimates for the current year's deficit outcome in setting the budget for the following year and make prudent assumptions about real GDP growth and deflators for the budget year. Making these measures effective should be backed by strict rules on the use of windfalls in the form of higher than expected revenues or lower than projected expenditures.
- Clearer and more balanced presentation of the contents of the budget is required, for example through greater openness about the implications of moves that take spending off budget. Communication would also be enhanced by more sensitivity analysis of fiscal outcomes to domestic and international economic developments. More thorough parliamentary examination and debate of draft budget documents should be encouraged.
- The authorities should communicate more openly over the course of the budget year when revenue collection or spending looks to threaten the achievement of budget targets.
- The temptation to resort to accounting rules in order to make progress on fiscal consolidation look more impressive should be resisted.

The above measures should be reinforced by stronger commitment to medium-term fiscal goals. In particular, the government should back the four year period Convergence Programme by a visible and possibly binding policy statement. More transparent communication on fiscal developments over the course of the budget year would also allow the Central Bank to reduce the level of comment and detail on its fiscal projections in the quarterly inflation report.

Box 2.2. **The time schedule for euro entry**

In public debate early euro entry dates of 2006 or 2007 were initially considered, conditional on fiscal consolidation and disinflation. However, no official statements, by the Ministry of Finance or the Central Bank, backed such ambitions.[1]

In 2002 a Committee of Experts from the Ministry of Finance and the Central Bank was set up by the government at the time with a view to define a strategy for euro entry. The preparatory work was based on consultations that also involved representatives from the business sector and the trade unions. A key issue for discussion within the Committee was whether a precise date or a target period should have been announced. In the event, the first option was chosen on the ground that it would have provided a clearer signal to markets about the government commitment to fiscal adjustment. As to the precise target date, the Committee agreed that the earlier the participation in the euro area, the shorter the period of exposure to possible sudden and marked reversals of capital flows. Reflecting this, in the summer of 2003 the government and Central Bank announced in a joint press conference the intention to join the euro area in 2008.

Since this official announcement, the target date has been modified once because of unexpectedly adverse fiscal developments. In May 2004, after upward revision of the general government deficit for 2003, the target date was deferred to 2010, sticking to the initial 2008 deadline being perceived as likely to cause undue short term economic costs.

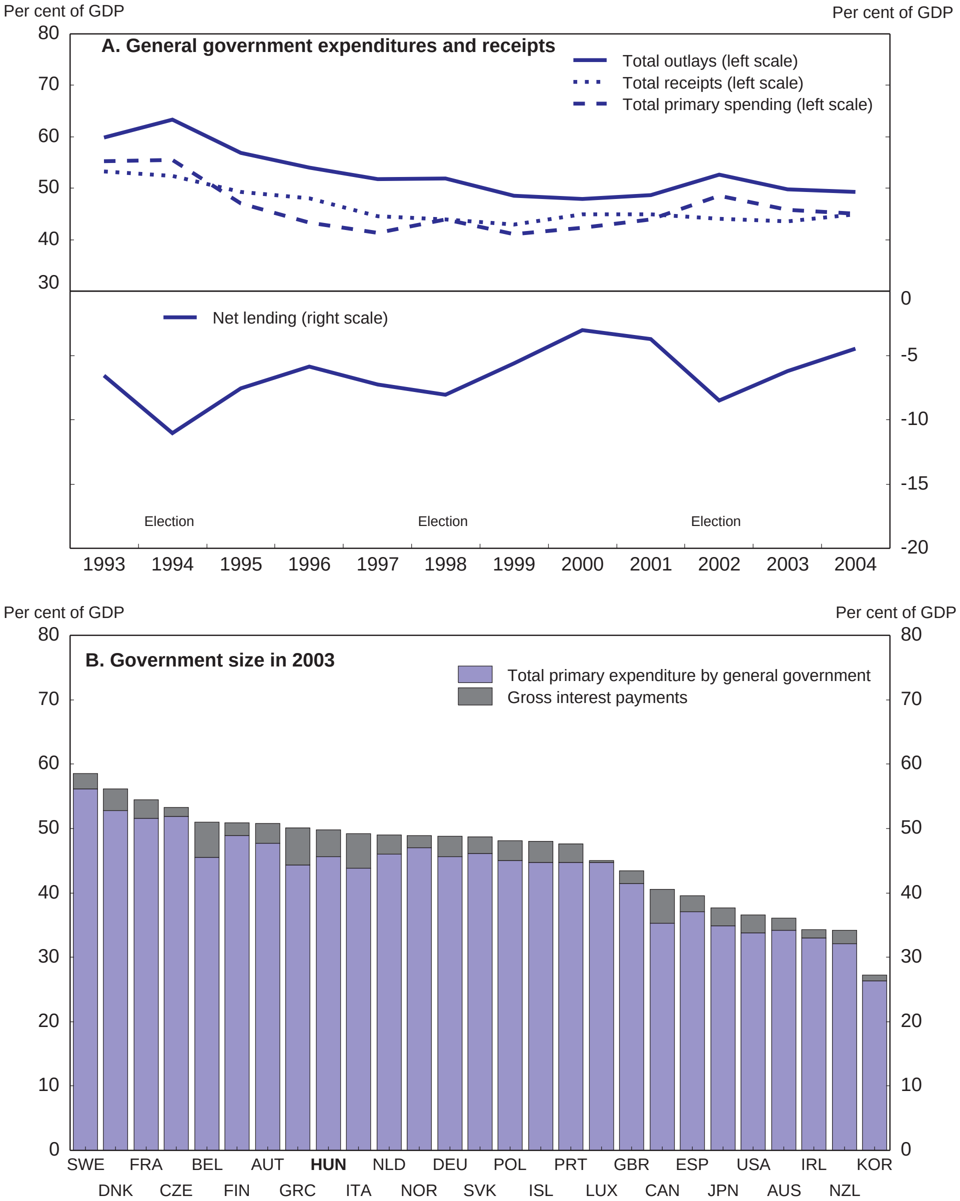
While there was a change in the target date, the government is now following a more nuanced communication approach. For example, the *Convergence Programme* of May 2004 stated that introducing the euro earlier than 2010 was still a possibility: "*if conditions turn out to be more favourable, and inflation falls more rapidly, the adoption of the euro can take place already in 2009 under the baseline scenario*". Later on, the reference to economic developments has been ignored as the deficit outturn for 2004 was revised upward. Accordingly, the updated *Convergence Programme* of December 2004 announced that "…*the criteria for joining the euro area can be satisfied by 2008 and, the introduction of the euro is possible in 2010*." These changes signal a shift in emphasises with the government trying to find a balanced approach between using the target date as a policy anchor, on the one hand, and, on the other hand, avoiding any exacerbation of the costs of adjustment.

1. See Csajbók and Csermely (2004).

The second challenge in monetary policy, concerns the sustainability of the current monetary policy approach which in Hungary constrains the inflation target by an exchange rate band. The authorities see the current system as contributing to macroeconomic stability, because it mimics the ERM II framework, which Hungary has to join before entering the euro area.[3] Nevertheless, there have been episodes of currency volatility, notably in 2003, and more recently the exchange rate has moved close to the upper edge of the band. There is a risk that the current system may attract further speculative capital flows (inward in the near term, but clearly also outward), reflecting the expectation of future shifts in the band.

The strategy for EMU entry requires the same contribution of fiscal discipline which was missed during the earlier run up period. Some apparent progress in fiscal consolidation has been achieved towards reaching the Maastricht criteria since 2002 (Figure 2.1). However, the deficit figures contain large debt transfers and other one-off operations, as well as sizeable accounting revisions more recently. Once account is taken of these factors, a considerably slower pace of deficit contraction is implied. In the past, fiscal targets were mostly missed because of too optimistic revenue projections. Achieving the necessary fiscal consolidation for the future will therefore make it necessary to bring expenditure plans more into line with cautious revenue projections. Introducing a reserve item in the budget is a first step in the right direction. The government plans this year to realise 1.4 percentage points of GDP saving from private-public-partnerships (PPPs), taking expenditure on motorway construction off budget. In future years a lot of the government's plans rely heavily on successful application for EU funding but because much of it entails co-financing these plans cannot strongly be relied on as a means of reducing deficits (see Annex 2.A1).[4]

Figure 2.1. **Fiscal developments and the size of the government sector**



Source: OECD Economic Outlook, No. 77 Database.

These developments underscore that further tangible progress will be needed if Hungary is to be assessed positively by the European Union authorities in time for the 2010 deadline. In 2004 the European Commission recommended that Hungary – along with some other new member states – be placed on an excessive budget deficit procedure, although the Commission did not question the speed and magnitude of the announced adjustment path.[5] Indeed, looking at the fiscal adjustment experiences of some current euro area members in the 1990s suggests that, if accomplished as planned, the adjustment required by Hungary falls comfortably within the range of efforts put in place by its predecessors (Table 2.1). However, the Commission sees a risk that failure to achieve the deficit target for 2005 would impact on the reminder of the plan and undermine its credibility. With regard to the medium-term fiscal outlook, the Commission stressed that the *Convergence Programme* does not offer a full description of the possible impact of the reforms already in the agenda, or the state of their implementation.

Table 2.1. **Fiscal consolidation in EU countries**

In per cent of GDP

	Consolidation period	Budget balance at the beginning of period	Budget balance at the end of period	Overall fiscal adjustment
Austria	1995-97	-5.3	-2.0	3.3
Belgium	1992-97	-8.1	-2.0	6.1
Denmark	1996-97	-1.0	0.4	1.4
Finland	1993-96	-7.2	-2.9	4.3
France	1995-97	-5.5	-3.0	2.5
Germany	1993-97	-3.1	-2.7	0.4
Greece	1990-97	-15.7	-4.0	11.7
Ireland	1992-94	-3.0	-2.0	1.0
Italy	1991-97	-11.7	-2.7	9.0
Netherlands	1990-96	-5.3	-1.8	3.5
Portugal	1993-96	-8.1	-4.8	3.3
Spain	1993-97	-7.0	-3.2	3.8
Sweden	1993-97	-11.4	-1.0	10.4
United Kingdom	1993-97	-7.9	-2.2	5.7
Average of above		-7.2	-2.4	4.7
Hungary	2004-08 plan	-5.3	-2.8	2.5

Source: OECD; IMF; and European Commission.

In this framework, establishing a climate of shared objectives and close co-operation between fiscal and monetary policies is important in order to avoid extra costs for the economy. This assessment can also be found in a Central Bank report of 2002, which stated that “Co-ordinated fiscal and monetary policies will enhance credibility of the disinflation programme, having a favourable impact on inflation expectations and ultimately reducing the costs of curbing inflation.”[6] However, tensions between the Central Bank and the government have since surfaced in public debates: a situation that may have contributed to maintaining imbalances in the policy mix between monetary and fiscal policies. The price of lack of balance has been visible in high interest rates and an exchange rate close to the upper end of the exchange rate band.[7]

Monetary management could be refined

The framework of monetary policy

The Magyar Nemzeti Bank’s (MNB) primary objective is to achieve and maintain price stability. The operational framework of the MNB comprises an inflation targeting regime bounded by a ± 15% euro-based exchange-rate band. The inflation targeting regime was set up in 2001 and closely resembles those in other OECD countries. There is open disclosure of the Bank’s outlook on inflation and other aspects of the economy through a quarterly report, as well as publication of the minutes of meetings of the Monetary Council. The regime sets targets in terms of end-of-year headline inflation, and these are announced around 18 months in advance.

The current exchange rate band was introduced in 2001, with expectations being at the time that the currency would join ERM II not long after its introduction. Though admitting that the exchange rate band involves certain disadvantages, the authorities consider these are outweighed by advantages, most notably that the band signals the strong commitment to join ERM II at some point.[8]

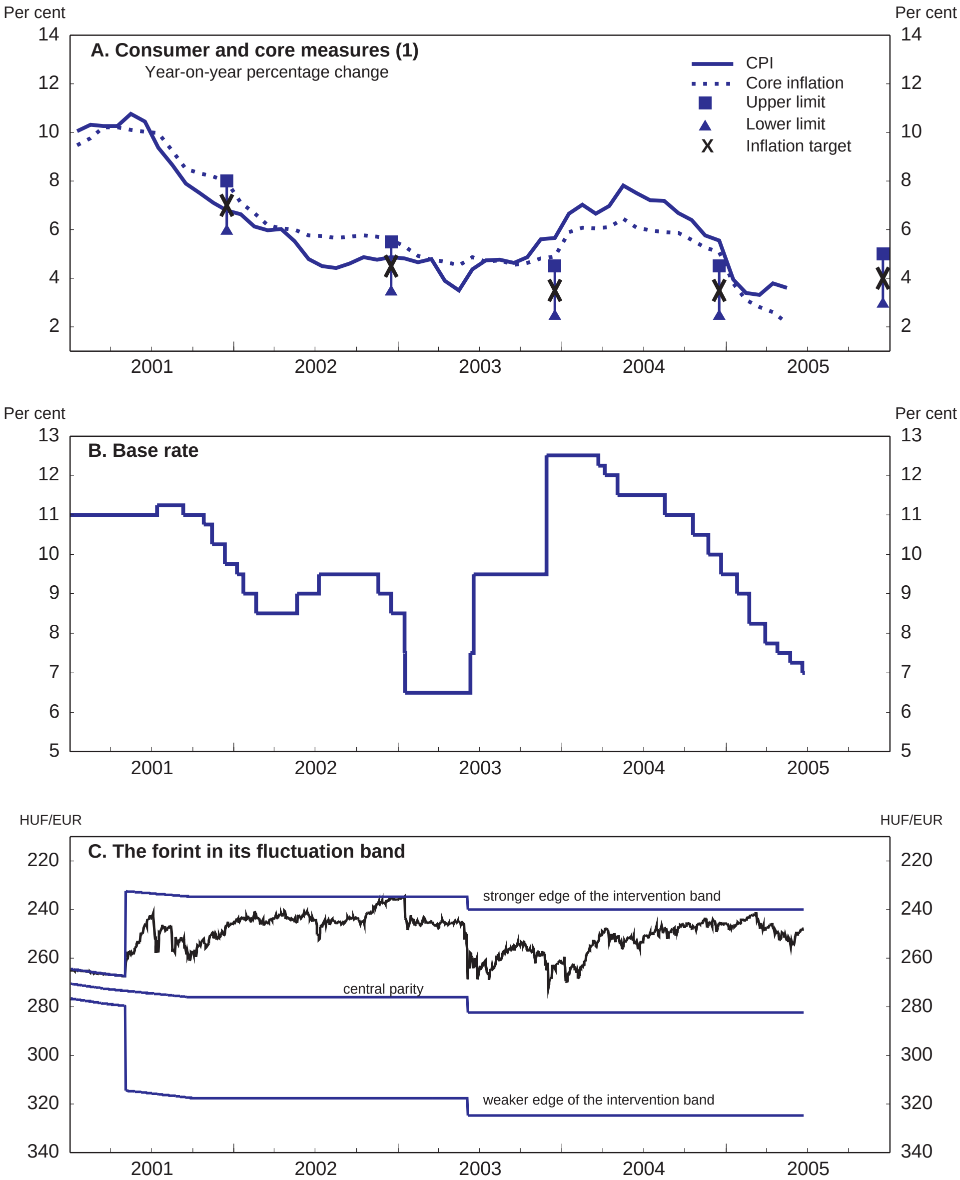
Real interest rates remain high and monetary conditions are tight

Since the end of 2003 inflation targeting has been difficult (Figure 2.2). At the beginning of 2004 base rates were very high, having been hiked in response to exchange rate problems in the previous year.[9] However choosing the speed at which the base rate should be lowered was tricky because in mid-2003 there had been a reversal of a previous trend of falling inflation. Supply shocks and temporary factors were contributory elements but wage inflation and households' consumption expenditures were also higher than expected. Moreover, in early 2004 inflation accelerated further due to an increase in indirect taxes.

Though the Central Bank cut rates several times in 2004, and has made further cuts so far in 2005, market interest rates remain high. The MNB cut its base rate seven times last year, by a total of 300 basis points (Figure 2.2). As of June this year, six further cuts had been made and the base rate stood at 7.0%. However, throughout 2004 market interest rates declined at a slower pace than consumer price inflation and real interest rates did not begin to ease until the first quarter of 2005. As of May 2005, the real rate of interest was about 4% (Figure 2.3), about one and a half percentage points lower than a year earlier when the base rate was 12.5%. Though real interest rates are now falling, they remain relatively high compared to some other countries in the region, notably Poland, the Czech Republic and the Slovak Republic. Furthermore, Hungary's nominal interest rate gap with the euro area remains substantial, which is in stark contrast with Poland and the Slovak Republic, in particular, whose economies are growing much more quickly. At the same time, a higher nominal interest rate is in part the reflection of the slower pace of disinflation in Hungary.

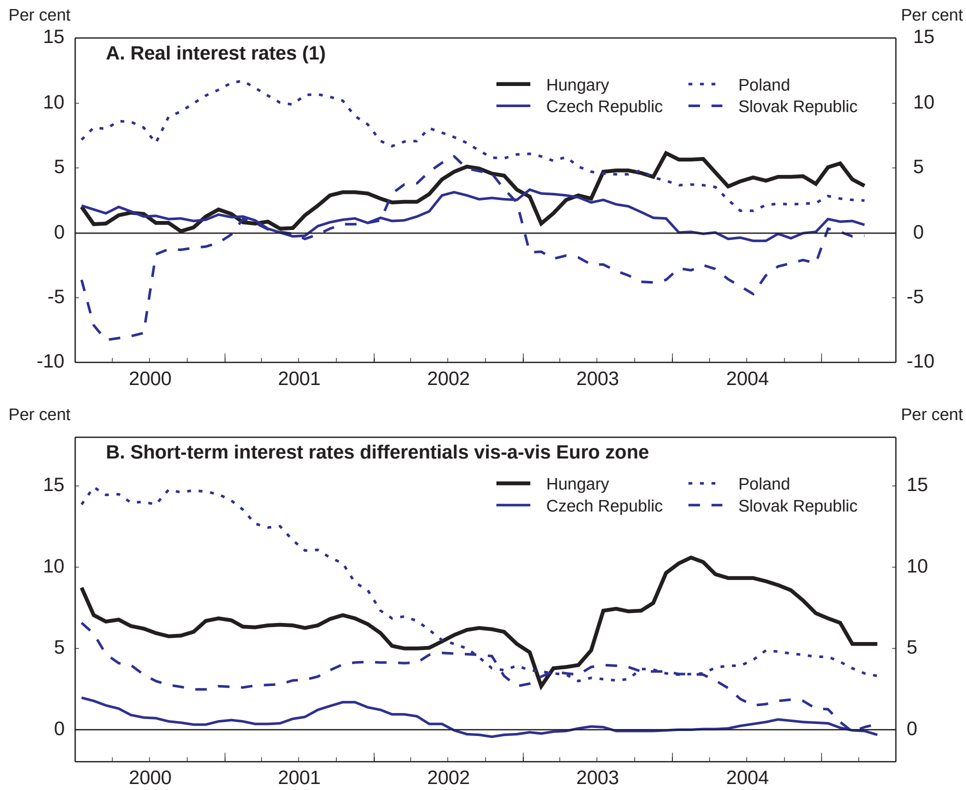
The rise in policy and market interest rates at the end of 2003 was followed by currency appreciation and the forint moved close to the upper end of the intervention band (Figure 2.2). This reversed somewhat in the first quarter of 2005, partly because markets reacted to uncertainties surrounding the stance of fiscal policy (see next section) and also because of the expectation of further cuts in interest rates.[10] Even so, the currency has appreciated by 7% in nominal effective terms and as much as 23% in real effective terms since end-2003 (using unit labour costs and export prices as deflators). Although 2003 marked a period of sizeable financial market volatility, the strong effective appreciation of the currency over the past year and a half means that monetary conditions have tightened substantially and, notwithstanding the recent cuts in policy rates, have remained relatively tight (Figure 2.4). *The MNB should therefore continue with its gradual approach to reducing policy rates as long as reaching the targeted amount of disinflation is not in danger.*

Figure 2.2. **Inflation, exchange rates and interest rates**



1. Core index, computed by the Central Statistical Office.
Source: OECD; Central Statistical Office and National Bank of Hungary.

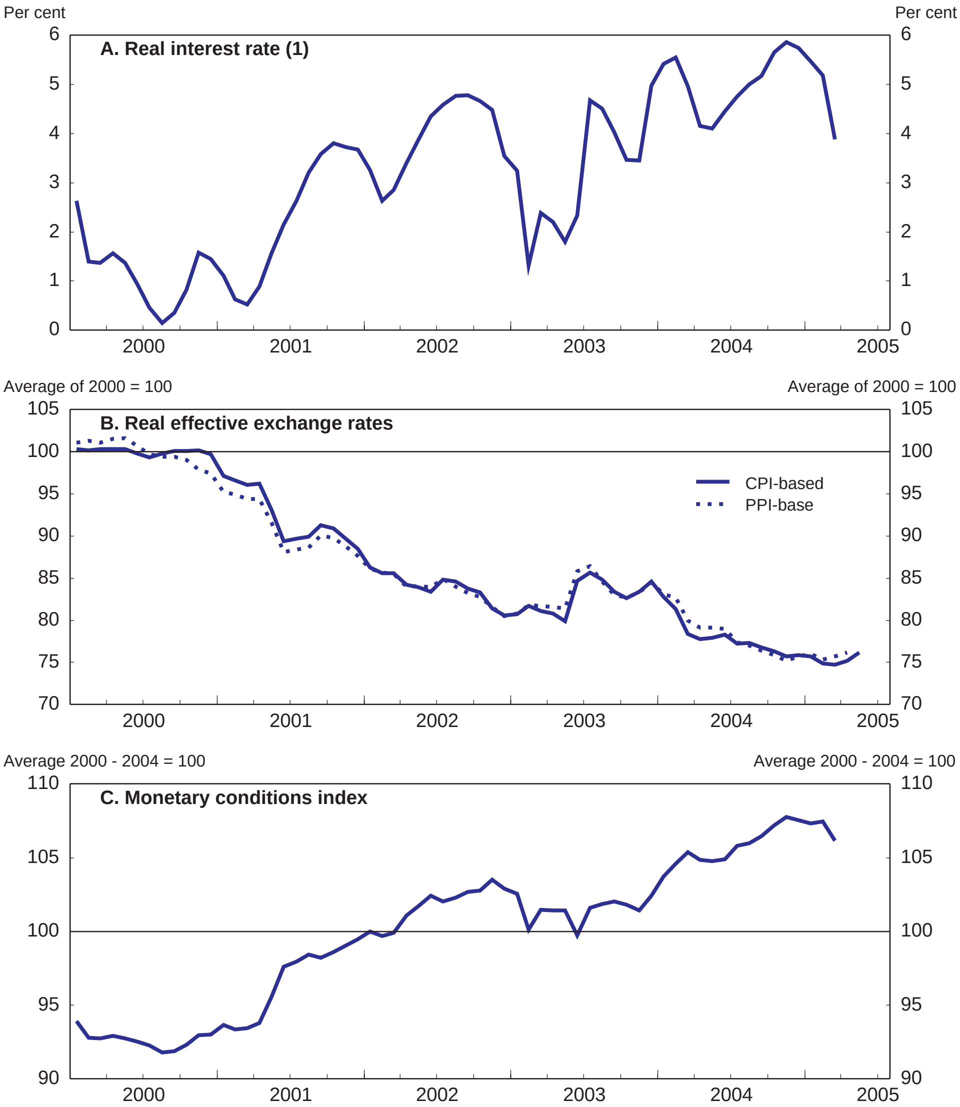
Figure 2.3. **Interest rate differentials**



1. Deflated by CPI.

Source: OECD Economic Outlook, No. 77.

Figure 2.4. **Monetary conditions**



1. Calculated as the 3-month Treasury bill yield deflated by the 12-month inflation rate of the maturity period.

2. The Monetary Conditions Index was computed according to the following formula: I(t) = I(t-1) * [1 + (r(t)-r(t-1)) - .38 *log(RER(t)/RER(t-1))], where r = real (CPI deflated) short-term interest rate; RER = real exchange rate with respect to the basket.

Source: OECD; Magyar Nemzeti Bank.

Some fine tuning of the inflation-targeting regime could help in the run up to euro entry

Some fine tuning of technical aspects of the inflation targeting regime could contribute to a smoother implementation of monetary policy and thereby help monetary policy in a successful run up to euro entry.

First, some adjustment to the specification of the inflation target could be made. In most countries, policy interest rate changes typically have an impact on inflation with a lag of at least one year, because transmission mechanisms typically involve variable lags of between one and two years.

Estimates by the staff of the MNB suggest that Hungary is not an exception, which confirms that the Monetary Council is unlikely to affect the end-year inflation outcome within its annual time horizon.[11] Hence, *targeting inflation within a constant multi-annual horizon is the preferred strategy of many Central Banks and this practice could also be introduced in Hungary. Specifically, variation in the time lag between Monetary Council decisions and inflation targets in the current inflation targeting regime could be avoided by setting a rolling target, say 6 to 8 quarters ahead.* The new approach would not necessarily represent a radical departure from current practices. *The already existing annual target could in fact be presented as part of the medium-term disinflation path that the policymakers envisage.* Announcing such a path can serve the purpose of transparency and help better shape expectations in relation to price stability and EMU entry.

Second, issues also arise in connection with the recent decision taken by the government to extend from 9 to 13 the number of members of the Monetary Council, the 4 new members having been appointed for six years. *Large changes in the size of the Council weaken confidence in the continuity of the Central Bank's policy.* In effect, the new situation implies that the direction of monetary policy could change abruptly when the newly appointed members change. *To address this issue the authorities should make sure that when the terms of the new four members end, the terms of their successors are appropriately staggered.*

More substantial fiscal consolidation is needed

The framework of fiscal policy provides too much room for accounting measures

According to the officially approved Maastricht deficit figures, the government has achieved considerable progress in fiscal consolidation over the past few years (Table 2.2): in 2002 the general government deficit peaked at 8.5% of GDP on an accrual basis, but by 2004 the deficit was 4.5%.[12] The government plans to achieve the remaining deficit reduction needed to fulfil the Maastricht deficit criteria with cuts of 0.6-0.7 percentage point per year between 2005 and 2007. In perspective, however, the deficit reductions required for joining the euro-area will be larger than suggested by the headline deficit figures. This is because under a Eurostat ruling achieving targets beyond 2005 will have to take into account that from 2007 onwards Hungary will no longer be allowed to adjust its headline deficit figures to take into account compulsory private pension fund contributions. Nevertheless, the recently reformed Stability and Growth Pact implies that the pension net costs will be partly taken into account by the European authorities in their assessment of progress in fiscal consolidation, if the deficit has declined substantially and continuously and has reached a level that comes close to the reference value (see Box 2.3).

Table 2.2. **Recent fiscal developments**

As a percentage of GDP, general government figures on an accrual accounting basis

	2002	2003	2004
Level of deficit at the time of September 2004 Notification to Eurostat	**9.2**	**6.2**	**5.3**
Extent of one-off operations	-2.9	-	-
Net impact of backward re-imputation of VAT Reimbursements	-	+0.7	-0.1
Of which:			
To preceding year	-	-	-0.7
From following year	-	+0.7	+0.6
Other deficit revisions	-	+0.2	+0.2
Implied revisions to September 2004 deficit	**-**	**7.1**	**5.4**
Adjustments to take into account the effects of pension reform	-0.7	-0.9	-0.9
Level of deficit at the time of March 2005 Notification to Eurostat	**8.5**	**6.2**	**4.5**

Source: OECD; Eurostat; and Ministry of Finance.

Box 2.3. **Budget accounting methods**

The Hungarian authorities use two sets of budget accounts. Following liberalisation, a cash-based account using the IMF's *Government Finance Statistics* (GFS86) guidelines was developed. The GFS account is used in the legislated budget and its corresponding deficit presented to parliament. More recently, an accrual-based account using the European Commission's *European Standard Accounts* (ESA95) guidelines has been compiled. This is the account used for the official government deficit target (the so-called Maastricht deficit derived from ESA95 accounts).

In a decision of September 2004 Hungary – along with other EU member states – has been allowed by Eurostat to take into account temporarily in the headline deficit figures adjustments relating to compulsory private pensions. The basic principle remains that it is inappropriate to classify financial funds involved as part of the general government balance, and from 2007 onwards, all government figures will have to be revised upwards by the full amount of the annual adjustments.

However, a recent Ecofin ruling introduced as part of the reform of the Growth and Stability Pact established that, when deciding about the abrogation of an excessive deficit, the Council of the EU shall also take into account on a linear digressive basis the pension reform burden of compulsory pensions, if the deficit has declined substantially and continuously and if it has reached a level that comes close to the reference value (of 3% of GDP). The new decision applies with regard to a period of five years, during which the full amount of the deficit consequences of the reform to the publicly managed pillar will be taken into account in 2005, followed by 80% in 2006, 60% in 2007, 40% in 2008 and finally 20% in 2009. Besides Hungary, Poland and Sweden, the Slovak Republic and Denmark will also benefit from the new rulings.

The ESA95 accounts are increasingly the principal benchmark for analysis in OECD research. At the same time, the GFS accounts or adjusted versions of them can provide a useful different perspective to the ESA95 accounts. For instance, the accrual methods can sometimes give a misleading indication of the economic impact of budgets. The implications of the switch in VAT collection systems for the 2004 budget (see main text) illustrate this point well.

Aside from the official ESA95 accounts and the GFS accounts, the Central Bank also produces a set of accrual-adjusted data for the general government based on the SNA accounting methodology. The principal difference between the accrual based accounts of the government and the MNB is the inclusion in the latter of the quasi-fiscal activities of the Hungarian Development Bank, the National Motorway Company and the State Railway Company. In addition, the MNB figures also take into account the budgetary effects of public private partnership contracts (PPPs). This is because PPPs contracts may be a source of future fiscal liabilities, although under Eurostat's rules (see main text below) they are exempt from being taken into account in the general government accounts conditional upon meeting certain requirements. The MNB figures are regularly published and updated in the context of the *Quarterly Report on Inflation*, which presents discussions of the macroeconomic effects of changes in the fiscal policy stance.

However, the substantial improvement in the headline balance since 2002 also stems from a combination of transitory and accounting factors. Notably these include one-off adjustment operations and accounting revisions undertaken either independently by the Hungarian government, or in agreement with the European Union. The main changes are as follows:

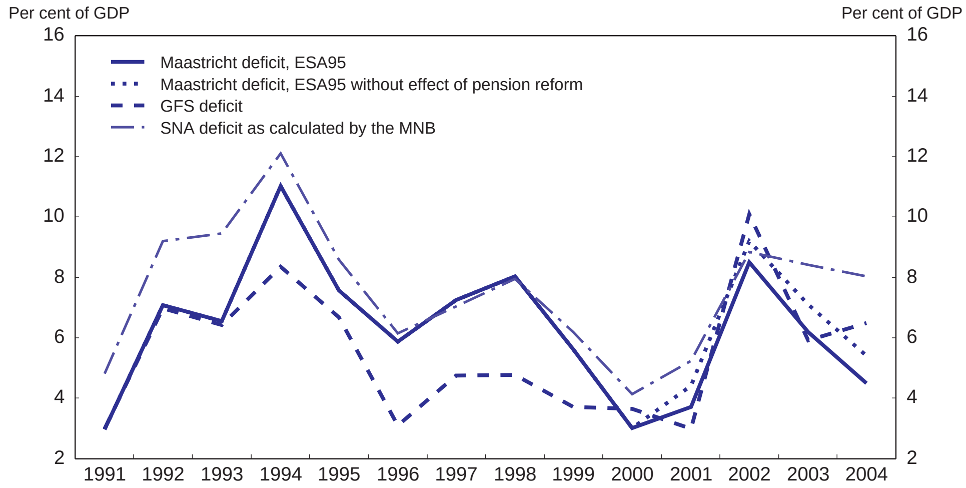
- Part of the 2002 deficit deterioration (2.9% of GDP on an ESA95 basis) was due to debt transfers and other one-off operations which, once taken into account, imply not only a reduced deterioration of that year's budget deficit but also a somewhat flattened fiscal adjustment thereafter (Table 2.2).

- The decision taken at the beginning of 2005 to re-impute VAT reimbursement backward has also played a role, the impacts having been a slight downward revision of the deficit for 2004 and a sharp upward revision for the previous year (0.7% of GDP). This has considerably magnified the apparent deficit contraction which occurred in the course of 2004.

- Finally, recent changes in Eurostat rules are authorising, until the March 2007 notification, the adjustment of the general government balance in ESA95 accounts to take into account compulsory private pensions' burden (see Box 2.3). Following this decision, deficit levels from 2000 onwards have been lowered by at least 0.6% of GDP per year, with the impacts on deficit levels for both 2003 and 2004 equalling 0.9% and 1.0% for 2004 of GDP.

Alternative budget calculations to the ESA95 accounts broadly confirm the picture of an improving general government deficit over the past few years (Figure 2.5). The government cash account deficit was 10.1% of GDP for 2002, which compares to 6.4% of GDP in 2004. Nevertheless, unlike the dynamic of the accrual account, the declining path of the cash deficit reversed in 2004, increasing by about 0.5% of GDP from the previous year. Another source of figures for the general government accounts is the MNB, which adjusts the ESA95 accrual based accounts of the government in order to include temporary factors and the quasi-fiscal activities of various state enterprises (see Box 2.3). While this measure confirms that there has been a reduction in the deficit since 2002, the comparatively small fall that has taken place up to 2004 (a total adjustment of 0.8% of GDP) implies a less significant tightening than suggested by the ESA95 accounts.

Figure 2.5. **The general government deficit under different accounting methods**



Source: OECD, Ministry of Finance and Magyar Nemzeti Bank.

In sum, assessing the speed and intensity of fiscal consolidation is very difficult for Hungary. Moreover, the context of hesitant budget developments and high interest rates raises the issue of the sustainability of the government debt burden. Gross debt as a percentage of GDP has continued to increase over the past two years (Table 2.3). As of 2004, it reached 57.6% based on the Maastricht definition, which takes into account in the headline debt figures adjustments relating to compulsory private-sector pensions: excluding these adjustments the debt to GDP ratio rose to 60.7%. If inflation, GDP and the public sector deficit develop in line with the plans of the *Convergence Programme*, interest payments (now at 4.4% of GDP) will decline by some 1% of GDP over the next three years. However, because progress in disinflation will involve the disappearance of the help that inflation can provide to public finances, the future of the fiscal and public debt balance will also depend upon the success of structural public sector reforms. The rest of this Chapter examines the lessons for budget reforms from the 2004 budget experience and 2005 budget plans. Chapter 3 provides a framework for reforming in a cost effective fashion the health care system, the challenge facing policy-makers being to reconcile budgetary goals with the need to push forward the modernisation of the services offered.

Table 2.3. **Gross public debt**

End of year

	2002	2003	2004
	Per cent of GDP		
Central government	56.5	58.3	59.7
Social security funds	0.8	2.1	2.2
Local governments' gross debt	1.6	1.5	1.7
General government gross debt (Maastricht definition)	**55.5**	**56.9**	**57.6**
Adjustment to take into account the effects of pension reform	1.7	2.2	3.1
General government gross debt without effects of pension reform	**57.2**	**59.1**	**60.7**

Source: Ministry of Finance.

Lessons from the 2004 budget point to the need of more realistic fiscal assumptions

Based on the expectation of a general government deficit of 5.2% of GDP for 2003, both on an accrual and cash basis, the 2004 budget plan aimed for deficits of 3.8 and 4.5% on an accrual and cash basis respectively (the difference reflected changeover in the method of collecting VAT on imported goods because of EU-accession adjustments). The budget comprised some bold plans, including cuts in central government staff. In addition, central government transfers to local government included only a small part of the planned 6% increase of the wage bill, with the aim of prompting employment cuts in other areas of government. On the revenue side, the budget incorporated the effects of the elimination of numerous tax allowances and credits, while it was also assumed to be supported by the increase in VAT rates. These revenue enhancing initiatives were expected to more than offset the losses generated by reductions in personal-income and corporate tax rates. All in all, fiscal revenues were seen to increase by about half a percentage point of GDP as compared to 2003, broadly equalling the amount of the targeted decline in primary spending. Moreover, fiscal adjustment was set to be helped by a decline in interest spending of 0.4 percentage point of GDP.

The general government deficit came in at an estimated 4.5% of GDP on an accrual basis (taking into account adjustments relating to compulsory private-sector pensions) and 6.4% on a cash basis; relative to initial budget documents this represents a slippage of respectively 0.7 and 1.2 percentage points of GDP (Table 2.4). However, adjusting the initial 3.8% of GDP accrual deficit target to take into account the pension issue shows a significantly wider slippage (1.6% of GDP).[13] The actual real GDP growth outturn for 2004 was close to half a percentage point higher than the 3.5% originally projected in the budget. However, having been fuelled by robust growth in exports and investment, rather than consumption, stronger than expected cyclical conditions did not support the revenue side of the budget.

To complete the general description of fiscal developments in 2004, consideration has to be given to the outturn by different levels of government. The central government missed its deficit target by the largest margin in 2004; that is, 1.2 percentage point of GDP on a cash basis. The second most important shortfall came from the social security system, which recorded a deficit of approximately 0.7% of GDP. On the other hand, sub-national levels of government turned out to be in balance as planned, with the local governments in slight deficit.

Table 2.4. **Budget plans and outcomes**

HUF billion unless otherwise specified

Accrual basis (ESA95 account)

	2003	2004	2004	2005	2005
	Outcome	Approved[1]	Outcome[2]	Submitted[3]	Approved[4]
	HUF billion				
Primary revenues	10 156	11 038	11 347	11 947	12 029
Primary expenditures	10 766	11 096	11 605	12 148	12 234
Primary balance	-609	-58	-258	-201	-205
Primary balance (as a % of GDP)	-3.3	-0.3	-1.2	-0.9	-0.9
Interest revenues	43	37	56	32	32
Interest expenditures	763	756	892	878	875
Interest balance	-719	-718	-836	-846	-844
Gross revenues	10 200	11 076	11 403	11 979	12 061
Gross expenditures	11 529	11 852	12 497	13 026	13 109
Accrual balance	-1 329	-776	-1 094	-1 047	-1 048
Accrual balance (as a % of GDP)	-7.1	-3.8	-5.4	-4.7	-4.7
Adjustment to take into account the effects of pension reform	169	--	194	211	247
Corrected balance	-1 160	-776	-901	-836	-801
Corrected balance (as a % of GDP)	-6.2	--	-4.5	-3.8	-3.6
GDP	18 568	20 450	20 216	22 270	22 180

Cash basis (GFS account)

	2003	2004	2004	2005	2005
	Outcome	Approved[1]	Outcome[2]	Submitted[3]	Approved[4]
	HUF billion				
Primary revenues	10 120	10 997	10 937	11 892	11 943
Primary expenditures	10 491	11 242	11 443	12 151	12 224
Primary balance	-370	-245	-507	-259	-280
Primary balance (as a % of GDP)	2.0	-1.2	-2.6	-1.2	-1.3
Interest revenues	91	79	98	111	111
Interest expenditures	815	760	893	885	885
Interest balance	-724	-681	-796	-774	-774
Gross revenues	10 211	11 076	11 035	12 004	12 055
Gross expenditures	11 306	12 002	12 337	13 037	13 109
Cash Balance	-1 095	-926	-1 302	-1 033	-1 054
Cash balance (as a balance as a % of GDP)	-5.9	-4.5	-6.4	-4.6	-4.7
GDP	18 568	20 450	20 216	22 270	22 180

1. As approved by parliament in December 2003.
2. Estimate at the beginning of 2005.
3. As submitted by the government to parliament in October 2004.
4. As approved by parliament in December 2004.

Source: Ministry of Finance.

Inaccurate base year estimates

Progress towards reaching the deficit set out in the 2004 budget went severely off track through upward revisions of the 2003 deficit in the course of the budget year. Indeed, the 5.2% deficit estimated at the time of budgeting was increased in several steps to the now reported deficit of 6.2% on an ESA basis – taking into account compulsory private-sector pensions (the deficit would be 7.1% once these revenues are excluded). The large upward revisions in the 2003 deficit resulted in several intra-year revisions to the deficit target for 2004. Even so, the budget outcome for 2004 not only overshot the initial target by a large amount; it even exceeded the revised deficit targets, notwithstanding new measures of fiscal restraint introduced during the course of the year, notably:

- Expenditure controls, particularly those concerning hospitals, and tighter caps on subsidies for prescribed pharmaceutical products were introduced in the first half of the year (see Chapter 3, for details);
- Conditions for the use of unspent appropriations from previous years were tightened, with ministries being required to deposit these appropriations in an *ad-hoc* fund. Withdrawal from the fund was made conditional upon approval by the Ministry of Finance (July);
- Spending ceilings on non-central budgetary entities (notably, local governments and other extra-budgetary funds excluding the social security funds), whose expenditures are subject to the requirement of a balanced budget, were tightened (August);
- One-off measures were taken to collect dividends from state owned enterprises (August);
- One-off measures were introduced to freeze the reimbursement of the value added tax (VAT) refunds (November; see Annex 2.A2 for more details).

Changes in accounting VAT revenues

The 2003 deficit also got revised up early this year through changes in the allocation of VAT revenue across budgets in the process of calculating the 2004 deficit outcome. Other OECD countries have sometimes resorted to practices that tend to improve their fiscal positions, including changes in the calendar for tax payments, as has happened in recent years in Austria, Ireland and Sweden, for example.[14] In a variant, Hungary has, over the past few years, repeatedly changed the time framework for VAT refunds owed to taxpayers.

An indication of the implications in terms of budget transparency from complex VAT accounting changes can be seen in Annex 2.A2 which provides a detailed discussion of recent decisions in this area. The broad lesson is that reliance on these practices, which were not well documented, has obscured the evolution of the underlying fiscal position of Hungary, although one effect has been to magnify the extent of the adjustment undergone in 2004.[15]

Excessively optimistic revenue expectations

The outturn of the central government is of particular interest as this level of government represents about half of the overall size of the general government and detailed accounting figures are available on a more timely fashion. Looking at this budget reveals that, even though output growth was stronger than initially expected, the bulk of the 2004 slippage reflected a lack of revenues.

The main factor underlying this shortfall was that the authorities had difficulties in meeting the VAT targets for a variety of reasons:

- There was a misreading of fiscal developments in 2003. Notably a one-off revenue increase, following the decision to widen the time lag for VAT refunds, was taken as permanent and this contributed to overestimate the revenue target for 2004. The overestimation approximated 0.3% of GDP;
- The permanent loss in VAT revenues caused in 2003 by the partial replacement of the VAT with the new simplified tax on entrepreneurs may have been improperly factored in the 2004 budget, thus also contributing to overestimating VAT revenues;
- The impact of the changeover in the method of collecting VAT on imported goods, which was somewhat higher than initially expected (by some 0.2% of GDP). Until end-April 2004, the VAT on imports was collected by the Custom Duties Office using case-by-case assessment methods. From May this system was replaced by a monthly self-declaration and payment system run by the Tax Office. However, reflecting the decision to extend the VAT self-declaration method to imports from third countries and the EU, rather than just the latter as originally planned, the switch resulted in a greater revenue shortfall (of about 0.8% of GDP, compared with an initial estimate of 0.6% of GDP). That is, there was a revenue shortfall of about two months, rather than the initially planned month and a half. Although the fall of VAT receipts begun in June, it was not visible until August.

All in all, in 2004 the extent of the VAT revenue shortfall relative to initial budget documents equalled 0.9% of GDP. This was partly countered by the positive impact of higher than expected stamp duties and contribution receipts so that the overall revenue slippage for the year was 0.7% of GDP.

The challenge of containing primary spending cannot be met by the state alone

Although the primary accounts of the central government were in balance, this outcome masks large deviations in individual budget chapters. The main sources of cash accounting pressure came from housing grants (a slippage of about 0.4% of GDP) and non-wage expenditures by line ministries (0.9% of GDP). However, these large deviations were balanced out by adjustments inside the central government itself, essentially reflecting lower than initially planned administered wage appropriations (including first and foremost strong wage restraints), as well as extra measures to contain consumption subsidies and to lower family benefits.

Developments at the broader general government level reveals that the ability of the state sector to contain spending was more than offset by expenditures on social security and by local governments. Greater than expected social security spending on a cash basis (0.4% of GDP) was evenly split between the health care fund and the pension fund, with the structural implications of these developments for the health care sector the topic of Chapter 3.

Underestimation of interest payments

Total general government spending for 2004 was also magnified by the impact of higher than expected interest payments, which added another 0.6% of GDP in extra spending. Although surprise factors played an important role in explaining this slippage, they were not the only influences. In effect, calculations run by the experts of the MNB on the basis of the originally planned payment structure of the debt, show that as much as 60% of the extra amount of interest payments could have been predicted relatively easily when the 2004 budget was prepared. Notably, a significantly lower yield curve than the market yield curve at the time of the budget was assumed and this factor alone explained 41% of excess interest payments for the year. In addition, pressure also stemmed from the assumption of an excessively low level of the primary balance deficit for 2003, even relative to the level of the preliminary estimate available at the time of the 2004 budget. The impact of the genuine “surprise effect” resulting from unexpected rising market yields accounted for 51% of the total effect. The complement to 100% of the resulting total is explained by the contribution of public bond issuances in foreign currencies which were not supposed to pay interest in 2004 (-12%).

The 2005 budget is shaped by one-off measures

The 2005 budget (approved by the Parliament in December 2004) sets a deficit target of 3.6% on an accrual basis, taking into account compulsory private pension contributions (Table 2.4). In line with the updated *Convergence Programme* of December 2004, the budget assumes a 4% rate of real output growth and 4.7% growth in the GDP deflator. It comprises a decline in primary revenue equivalent to 1.4 percentage points of GDP from 2004 and a decline in primary spending of 1.7% of GDP, implying a slightly improving primary balance. However, taking into account adjustments relating to the pension issue, the planned improvement of the primary balance is slightly larger (0.5% of GDP). As a result, achieving the planned 0.9% of GDP reduction relies on a fall in interest payments equivalent to 0.4 percentage points of GDP. In order to help the budget stay on track a reserve fund has been created which is aimed at covering unexpected revenue shortfalls. In March 2005 the size of the reserve fund, which initially equalled 0.5% of GDP, was increased to 0.7% of GDP (HUF 162 billion).

Concerning the revenue side, the budget comprises a number of changes to the tax system, including measures that will entail a reduction in revenues, the most notable being:

- The simplification of the personal income tax system that reduces the number of marginal tax rates from three – respectively, 18, 26 and 38% – to two. The middle rate has been dropped and the ceiling of the bottom bracket has been increased from HUF 800 000 to HUF 1.5 million. The 2005 budget assumes that a large number of households will have their income tax bill diminished following the introduction of the new measure;

- As part of the measures to stimulate employment, any newly created jobs will entail a greater tax exemption on the payment of the local business tax (worth HUF 1 million for each new job). Targeted cuts in employers social security contributions have also been introduced (see Chapter 4);

- The 25% tax deduction of the local business tax from the corporate income tax base will be increased to 50%.

The approximately 0.5% of GDP revenue shortfall that this group of measures will generate (on a cash accounting basis) is to be only partially offset by the following group of revenue increasing tax adjustments:

- Introduction of a temporary supplementary tax on the profit of credit and financial institutions. On top of the normal 16% tax rate on corporate profits, these institutions will be able to choose between two options, either the payment of a 6% levy on the interest rate margin (the default option), or the payment of an extra 8% tax rate on pre-tax profits. The background to the new measure is to be found in the exceptional prosperity of the financial sector at the present time, which has been driven largely by generous subsidies for housing loans and high interest rates. The government expects that most institutions will chose the second simpler to apply option;

- In value added taxation, new measures have been introduced to tighten deductibility conditions on telephony purchases, while the tax on car registrations has been increased by 5%;

- The value of tax allowances per year has been capped at HUF 100 000 and entitlements rights for high income households have been restricted.

The net impact of the above new measures will be to permanently raise tax expenditures by increasing benefits and reducing taxes, so that consolidation must rely essentially on expenditure reduction. But achieving the spending cuts set out in the budget looks challenging. As in 2004, the 2005 budget expects the bulk of the economies concerning the expenditure side to be borne by the central government. Key to achieving these savings will be meeting the planned freeze of carried-over appropriations from 2004 to 2005. Moreover, part of the planned 6% nominal rise in the public-sector wage bill will be covered using economies generated at the level of line ministries. Thus, in the case of public servants the central budget would provide for three quarters of the planned increase, while the reminder quarter would be covered from own savings (that is staff cuts and/or a rebalancing of spending priorities).

However, part of these savings will be offset by higher central government transfers to local governments and to the social security sector, although new budgeting rules introduced in 2004 aimed at limiting health care spending will be maintained in 2005.[16] Furthermore, the recent decision to defer the payment of 13th month public salaries from December to January, although it has benefited the fiscal outturn for 2004 (by as much as 0.6% of GDP), will have a neutral impact on the 2005 budget.

Budgeting priorities for 2005 also include a substantial cut back in the role played by the public sector in infrastructure developments with the government seeing considerable scope for expanding the involvement of the private sector in the construction and the maintenance of the motorways (see Box 2.4). Specifically, a deficit reduction of around 1.4% of GDP is assumed to come from the transfer under public private partnership contracts (PPPs) of motorways under construction, along with the management and the maintenance of those already operational. Half of the whole improvement will be one-off, reflecting the revenues accruing from the sale of the existing motorways assets. The other half is expected to reflect the shift to lower government spending in connection with the launching of the new PPPs.

The rationale behind switching to PPP financing is that it gives new impetus to the expansion of the road network, while at the same time ensuring the continuity of fiscal adjustment.[17] Indeed, keeping up to speed with motorway construction is an objective of utmost importance for the Hungarian authorities (see Box 2.4). However, registering this expenditure in the national accounts as private investment as opposed to government spending depends on assessment by Eurostat. First, off-budget accounting of this spending is conditional upon providing evidence that the partner bears most of the risk attached to the partnership. A key criterion in this respect will be the possibility for the government to apply effective penalties in cases where the partner is defaulting on its service obligations, rather than purely symbolic ones. The agreement with the partner is currently being finalised and once concluded it will have to be scrutinised and approved by Eurostat. In addition, a decision is to be made by Eurostat on the government's plan to record as negative capital investment the one-off revenues raised from the transfer of existing motorways assets into PPPs. Accomplishing this sequencing of actions may take some time.

Policy recommendations: a need for more transparency and medium-term commitment

In broad terms the authorities need to set more realistic budget objectives and to be more transparent in fiscal planning, assessment of progress over the budget year and in the estimation of outcomes. While many readers of news on fiscal developments do not look beyond headline outcomes, key observers, such as those in international financial markets, dig deeper than this. As the above assessment of 2004's budget experience and the plans for 2005 show, going beyond the headline figures reveals an unimpressive picture of failed ambitions and accounting changes. Regaining credibility would be helped considerably by a positive outcome this year and slippage from the 2005 deficit target should be avoided. There are risks in the government's plans to reach the deficit target with the help of a new public partnership deal for motorway construction. Indeed, the 2005 budget, together with the increase in private infrastructure spending, is in fact expansionary.

Box 2.4. **Past and recent measures affecting motorway construction**

The framework for motorway construction

The Hungarian authorities assign high policy priority to the development of motorways. An efficient and safe network lowers transport costs and supports productivity. Beyond the direct employment effects of construction and maintenance, motorways stimulate local businesses and employment, with both gains typically appearing shortly after a motorway starts to operate. Access to highways is considered to be crucial for attracting foreign investors and thus overcoming the big regional differences in economic activity and labour market performance. Furthermore, the geographical location of Hungary is favourable: being at the core of the Trans-European transport corridor, it offers the opportunity of a large traffic demand which should ensure better returns to motorway investments.

Network structure and problem areas

Although since 1995 the motorway network has been extended by 290 km to reach about 700 km at present, Hungary's motorway density remains low by international standards: it is just 40% of the European Union average. Motorway construction is an issue of public debate, the construction of the network being perceived to have progressed too slowly.

Financially, Hungary's experience with motorway construction has been disappointing. Until 1998 private capital (with state guarantees) was involved and motorways were operated using a pay toll system. Because tolls were expensive, traffic did not take off and the guarantee approach meant that the state had to cover the losses of the concessionaries. In the wake of this negative experience, the state role in motorway became again dominant from 1998, when responsibilities for motorway construction were moved to the state-owned National Motorway Company (NA). Attempts were also made to rationalise the payment system, so that users now pay a nation-wide vignette which can be weekly, monthly or annual. However, the vignette system is not a best practice since it discourages occasional users of the network relative to frequent long distance customers. From the financial viewpoint, it does not ensure enough returns to finance maintenance.

Current plans

Strong impetus has been given to motorway construction since 2003, when the government announced a new ambitious motorway plan. The plan foresees the completion of a further 431 kilometres of motorways before the end of 2006, by when another 400 kilometres will be started. The planned cost of the effort is € 2 500 million.

A new financing system will be introduced based on public-private partnership (PPP). The new scheme foresees that construction responsibilities will be taken over by the State Motorway Operating Company (ÁAK). ÁAK is also state-owned, but unlike NA its financial activities are recorded off-budget because more than 50% of its operating costs are covered by market revenues (including some motorway fees). As to the motorway sections that are already under construction (about € 800 million), they will be sold by NA to ÁAK which will be charged with their completion. The authorities plan to conclude a long term (20-30 years) PPP contract with ÁAK, involving the payment of an availability fee by the state to ÁAK. Disbursements will start as soon as a motorway section becomes operational and will cover the costs of the construction, operation and maintenance. They will be commensurate to the quality of the service.

PPP contracts typically involve three risks: demand risk (*i.e.* traffic), construction risk (for example, late delivery and other sources of additional costs), and availability risk (notably problems of performance, such as continuity in the provision of the service at a given quality). Under the forthcoming motorway contract, the state will cover the traffic risk (it will collect tolls), while ÁAK will bear the other two sources of risk. The state plans to abandon the vignette system at some point and revert to a user payment system that differentiates tolls according to demand. For this purpose it plans to make grater use of automated electronic systems.

The authorities are confident that although ÁAK is owned by the state and supplies a public service, the upcoming contract will meet European Union requirements for off-budget reporting of the availability fee paid. This is because the contractor operates as a commercial company, with the Hungarian State also planning to privatise ÁAK after the stipulation of the contract. As long as no state guarantees are provided, the debt accumulated by ÁAK is not considered as government debt.

In building credibility in budgeting for the medium-term the authorities need to:

- *Use realistic estimates for the current year's deficit outcome in setting the budget for the following year and make prudent assumptions about real GDP growth and deflators for the* *budget year. Making these measures effective should be backed by strict rules on the use of windfalls in the form of higher than expected revenues or lower than projected expenditures.*

- *Present in a clearer and more balanced fashion the contents of the budget, for example through greater openness about the implications of moves that take spending off budget. Communication would also be enhanced by more sensitivity analysis of fiscal outcomes to domestic and international economic developments. More thorough parliamentary examination and debate of draft budget documents should be encouraged.*
- *Communicate more openly over the course of the budget year when revenue collection or spending looks to threaten the achievement of budget targets.*
- *Resist the temptation to resort to accounting rules in order to make progress on fiscal consolidation look more impressive.*

The above measures should be reinforced by stronger commitment to medium-term fiscal goals. In particular, the government should back the four year period Convergence Programme by a visible and possibly binding policy statement. At present, since Hungary is not yet a member of the euro area in the sense of the Treaty, no sanctions under the excessive deficit procedure are possible. The decision to tie the yearly budgetary process to a more rigorously defined medium term strategy would be particularly meaningful in this context since it would enhance the political profile of the Programme. Regularly updated long-term fiscal projections would strengthen the commitment to fiscal sustainability.

More transparent communication on fiscal developments over the course of the budget year would also allow the Central Bank to reduce the level of comment and detail on its fiscal projections in quarterly inflation report. Assessment by the Central Bank of fiscal developments is of course important because the Bank has a “checks and balances” role and has to assess the implications of fiscal policy for domestic demand and inflation targeting. However, most Central Banks consider that they do not need to publish detailed projections of the general government deficit in order to keep fiscal developments on check. Many prefer to publish an examination of the impact of announced policies on the revenue and expenditure baselines and the impact of fiscal policy on aggregate demand. This assessment, together with timely commented and detailed fiscal projections by the fiscal authorities, is usually perceived to be enough to allow economic agents to form an idea of the amount of extra adjustment required in order to achieve the fiscal target.

Notes

1. As discussed below, Hungary uses various notions of fiscal accounts. For the purpose of the objectives mentioned at this point of the text, figures have not been adjusted to take into account compulsory private pensions.

2. For a wider discussion of these issues, including comparisons between selected countries, see recent papers by Schadler *et al.* (2005) and Afonso *et al*. (2005). See also Orbán and Szapáry (2004).

3. In effect, Hungary already has an exchange rate band which, like the ERMII band, involves a ± 15% fluctuation margin.

4. Gleich (2003) provides a comparative discussion of budgetary processes in central and eastern European countries.

5. The Commission's recommendation was finally adopted by the EU Council of Financial Ministers in January 2005. However, since Hungary is not yet a member of the euro area, the steps under the excessive deficit procedure involving sanctions do not apply. The exchange rate showed signs of a weakening in the aftermath of the decision and the average yield on treasury bonds trended up, due to pressures from the middle- and longer-term segments of the yield curve. Nevertheless, the decision did not result in any significant correction in sentiment as it was already taken into account by private agents.

6. See Csajbók and Csermely (2002). This document played an influential role in the discussions about EMU entry and the related medium-term strategy. Words in italics are per the original document.

7. Kovács and Moulin (2004) analyse the orientation of Hungary's policy mix over a medium term perspective and how it has varied more recently.

8. See Borghijs and Kuijs (2004) for a comparative discussion of exchange rate polices in central and eastern European economies.

9. See OECD (2004) for a discussion of developments in 2003 and the related sources of pressures.

10. For example, the January's close to 2.5% depreciation of the HUF against the dollar reflected the decision by a major rating agency to downgrade Hungary's long-term debt in response to missing fiscal targets alongside the ECOFIN's statement that the government had not taken the necessary actions to terminate it excessive deficit.

11. See for Hungary Kátay and Wolf (2004) and Horváth, Krekó and Naszódi (2004).

12. Including adjustments relating to the compulsory capital funded second pillar pension scheme.

13. To compare the accrual deficit figures reported with the 2004 deficit outcome, account has to be taken of the recent move to take into account compulsory private-sector pensions. Doing this converts the 2004 budgeted deficit from 3.8% to 2.9%. At the same time, the 2003 deficit outcome estimated at the time of the 2004 budget is converted from 5.2% to 4.3%.

14. See Koen and van den Noord (2005).

15. The significant deterioration of the deficit for 2003 (0.7% of GDP) was in fact associated with a slight improvement of the deficit for 2004 (0.1% of GDP).

16. As discussed in Chapter 3, these measures involve tighter requirements on spending by hospitals and on pharmaceutical products.

17. Estache and Serebrisky (2004) make a cross-country comparative investigation of the effectiveness of transport infrastructure deregulation and PPPs from various perspectives, including efficiency and fiscal sustainability.

BIBLIOGRAPHY

Afonso, A., C. Nickel and P. Rother (2005), "Fiscal consolidation in the Central and Eastern European Countries", European Central Bank, *Working Paper Series*, No. 473.

Borghijs, A. and L. Kuijs (2004), "Exchange Rates in Central Europe: A Blessing or a Curse?", *IMF Working Paper*, WP/04/2.

Csajbók, A. and Á. Csermely (eds.) (2002), "Adopting the Euro in Hungary: Expected Costs, Benefits and Timing", *Occasional Paper*, No. 24, Magyar Nemzeti Bank (MNB).

Csajbók, A. and Á. Csermely (2004), **"**Towards the Euro in Hungary: a Bumpy Road to Heaven?", presentation at the Tenth Dubrovnik Economic Conference, sponsored by the Croatian National Bank, 23-26 June 2004, Dubrovnik.

Estache, A. and T. Serebrisky (2004), "Where Do We Stand on Transport Infrastructure Deregulation and Public-Private Partnership?", *World Bank Policy Research Working Paper*, No. 3356.

Gleich, H. (2003), "Budget Institutions and Fiscal Performance in Central and Eastern European Countries", *Working Paper Series*, No. 215, European Central Bank.

Horváth, C., J. Krekó and A. Naszódi (2004), "Interest Rate Pass-through in Hungary", *Working Paper*, No. 8, Magyar Nemzeti Bank (MNB).

Kátay, G. and Z. Wolf (2004), "Investment Behavior, User Cost and Monetary Policy Transmission - the Case of Hungary", *Occasional Paper*, No. 12, Magyar Nemzeti Bank (MNB).

Koen, V. and P. van den Noord (2005), "Fiscal Gimmickry in Europe: One-off Measures and Creative Accounting", *OECD Economics Department Working Papers*, No. 417, OECD, Paris.

Kovács, V. and L. Moulin, (2004) "Hungary's policy mix: from stability to crisis to…?", *ECFIN Country Focus*, Vol. 1, Issue 9,European Commission's Directorate-General for Economic and Financial Affairs, Brussels.

OECD (2004), *OECD Economic Surveys: Hungary*, Vol. 2004/2, OECD, Paris.

Orbán, G. and Gy. Szapáry (2004), "The Stability and Growth Pact form the Perspective of the New Member States", *Working Paper*, No. 4, Magyar Nemzeti Bank (MNB).

Schadler S., P. Drummond, L. Kuijs, Z. Murgazova, R. van Elkan (2005) "Adopting the Euro in Central Europe", International Monetary Fund, *Occasional Paper*, No. 234.

ANNEX 2.A1. EU TRANSFERS TO HUNGARY

Hungary is entitled to receive € 5.7 billion from EU funds in the budgeting period 2004-06 (roughly equivalent to 2.8% of GDP per year).[1] However, only about one quarter of this is assured and the rest relies on successful applications for funds by the Hungarian authorities and by businesses. Moreover this has to be balanced against two factors; statutory payments to the EU budget, which are estimated to be roughly € 2.1 billion, and co-payments to which much EU funding is conditional. It is estimated that, at the maximum level of funding co-payments will be about € 2 billion. Against this backdrop, the question arises for Hungary as to how to improve the administrative infrastructure for successful implementation and effective use of the funds.

Administrative requirements

A large administrative infrastructure has been set up to satisfy the EU's transparency requirements and to build capacity for government and business to make applications for funding. Success at this is decisive for the full exploitation of EU resources. Each type of EU financing facility requires a distinct administrative structure and body in the institutional framework. Six so called Managing Authorities have been set up, which comprise three Paying Authorities and more than thirty intermediate bodies. Among these, the administrative structures taking care of Structural and Cohesion Funds and the rural development funds are the most important in terms of potential revenue.

In the administrative structure for Structural and Cohesion Funds the principal Managing Authority is the National Development Office (NDO), which is under the Minister without portfolio responsible for European Affairs, while the responsibility for the execution of different objectives of these funds is assigned across Ministries. The Managing Authority has strategic functions (*e.g.* monitoring, financial controlling, and evaluation), while the operational work is delegated to the intermediate bodies (managing tenders). Paying functions are fulfilled by the National Authorising Office (NAO) belonging to the Ministry of Finance. The main beneficiaries of the Structural Cohesion Funds are municipalities as well as budgetary organisations and their institutions.[2]

The Authority charged for managing the subsidies destined to rural development is the Ministry of Agriculture and Rural Development (MoARD), while the Paying Authority is the Agricultural and Rural Development Agency (ARDA) belonging to the MoARD. The distribution of money for agricultural market measures and direct payment to agricultural producers are made through the HRDO.

Each fund has its own administrative process. For example, the structural funds are made available on the basis of member countries' Development Plans. The Hungarian National Development Plan sets out five programmes for support: the Human Resources Development Operational Programme (HRDOP), the Environmental Protection and Infrastructure Operational Programme (EPIOP), the Agriculture and Rural Development Operational Programme (ARDOP), the Operational Programme for Regional Development (OPRD) and the Economic Competitiveness Operational Programme (ECOP).

Budgetary issues

The budgetary and cash flow implications of EU related money transfers are very complex. There are three main financial flows: money arriving from the EU, Hungarian contributions to the EU budget and the co-financing of the EU funds. The remaining part of the Annex examines the key aspects of these flows.

Some inflows from the EU are included in government budgets (*i.e.* are budgetary items), while others go directly to non-government beneficiaries. However, only a small part of the budgetary items can be considered as budgetary revenue in a pure sense, as a large share is committed to predefined objectives (Structural and Cohesion Fund, Schengen facility and pre-accession programmes). The restricted use makes it difficult to assess these resources as budgetary revenue.

In most cases the actual payment by the EU takes place some time (about 3 years) after funding has been approved and when they are booked as revenue in accrual accounts. Roughly speaking, about one quarter of the EU money is booked in both cash and accrual accounts in a given year, while the rest provides cash to beneficiaries with a lag of up to three years compared to the date of acceptance of the project tender.

Funds going directly to non-government beneficiaries (notably agricultural market measures, direct payments to producers and financing internal policies) appear only in the balance of payments and in aggregate household and producer accounts. In contrast, both co-financing and the contribution to the EU budget (except the disbursement of custom duties of the EU) affect budgetary expenditure directly. Co-financing needs add up to roughly 50% of the EU money and occurs in line with the realisation of the projects. The Hungarian contribution to the EU budget equals approximately 1.0% of GDP.

There are two additional costs which can increase budgetary spending related to managing EU money: costs triggered by exchange rate risk and the costs of potential pre-financing in order to smooth the execution of projects. The contracting party faces some exchange rate risks, since its costs occur in domestic currency, while the amount granted to implement the project is available in euro. This risk is more important in the case of multiyear projects. The pre-financing of the project could be a useful tool to eliminate any risks related to slow payment or non-payment of the EU money for any reason. This kind of state guarantee lowers the cost to contractors.

Efficiency in the administration of applications and, in the case of investment projects, appropriate selection of projects on the basis of prospective returns are key to maximising overall cost effectiveness. Indeed, it is expected that the amount of eligible projects for financing through Structural and Cohesion funds will increase to up to 6 times the current amounts when the EU budget for 2007-13 is set.

Table 2.A1.1. **Major sources of EU funding between 2004 and 2006**

EU Funds and resources	Managing Authorities; Responsible organs	Paying Authorities/ Agencies	Aim of the fund	Beneficiary	Available appropriation between 2004 and 2006 (million €)	Financing	Access to money by beneficiary
Budget items							
Structural and Cohesion Funds	NDO[1] and other Ministries	MoF	Investments promoting economic competitiveness, human resources development, environmental protection, transport, agricultural, rural and regional development	Everyone, mainly municipalities	3 200	Advanced payments + Post-financing, payment depending on progress in realisation	Tender
Rural development from the EAGGF	MoARD[2]	ARDA[3]	Agricultural development	Everyone	600	Advanced payments + Post-financing, payment depending on progress in realisation	Tender
Schengen facility (up to 2006)	NDO and other Ministries[4]	CFCU[4]	Border protection	Public institutions	166	Pre-financing, reporting requirement after realisation of projects	No tender, report on the realisation
SAPARD, PHARE (up to 2006)	NDO, other Ministries and ARDA	MoF, CFCU	Agricultural and rural development, implementation of the *acquis communautaire*	Everyone	621[5]	Post-financing, payment depending on progress in realisation	Tender
Compensation				Government	235	Transfer	No tender
Items out of budget							
Agricultural market measures	ARDA	ARDA	Intervention, export subsidies	Producers	416[6]	Direct payment to producers after national pre-financing	No tender
Direct payments to agricultural producers	ARDA	ARDA	Subsidies to agricultural producers	Agricultural producers	662	Direct payment to producers (taking into account agricultural output in the year) after national pre-financing	No tender
Assistances under the title of internal policies	-	-	EU internal policies	Everyone	461	According to EU tender rules	Tender

1. National Development Office belonging to the Minister without portfolio responsible for European affairs.
2. Ministry of Agriculture and Rural Development.
3. Agricultural and Rural Development Agency.
4. Central Financing and Contracting Unit.
5. Payment of the accepted appropriations, No new appropriation since January 2004.
6. Effective payment depends on the quantity of production.

Source: Ministry of Finance.

Notes

1. Amount fixed in the Copenhagen package.

2. The subsidies of pre-accession programs are managed similarly, but besides of the NAO another institution also operates as a Paying Authorities, the Central Financing and Contracting Unit.

ANNEX 2.A2. KEY CHANGES IN VAT REIMBURSEMENT SINCE 2002

As reported in the main text, repeated changes affecting reimbursements of VAT funds due to taxpayers have occurred over the past years, with claimants typically falling into three categories:

- Companies whose outputs are subject to a VAT rate lower than the one applied to the inputs used in production;
- Exporting companies which pay the VAT on the inputs they purchase, although the sale of the final product does not generate any revenue in Hungary;
- Companies that buy for stocking reasons (*i.e.* a temporary reimbursement until the company decides to sell the stock).

Until 2002, the bulk of VAT claims had to be paid back within 30 days from the date of the claim deposit for amounts below HUF 500 000 and 45 days for amounts exceeding that sum, with the requirement being that any claims concerning a particular month had to be deposited by the 20th of the following month at the latest. In practice, most, if not all, refunds were paid prior to the 30 and 45 days deadline. For example, refunds claimed up to the 20th of January (*i.e.* relating to transactions done in December of the previous year) used to be reimbursed within the following month of February. Accordingly, the budgetary effects of these reimbursements were to worsen the level of the cash deficit for the current year along with that of the previous year deficit in accrual terms.

A first change in rules was made in 2003, when a directive was issued by the Ministry of Finance establishing that reimbursements had to be paid at the latest legally permitted day. Following this decision, reimbursements begun to be effectuated later than in the past, notably well into March for claims deposited at the latest on the 20th of January. The practical implication for 2003 was that the government exceptionally reimbursed claims concerning 11 months only, in spite of the fact that revenues were collected over a period of 12 month as usual. As a result, the size of the deficit on a cash basis was considerably reduced. At the same time, as the deficit defined on an accrual basis continued to be calculated following the old methodology, only part of the reimbursements ascribable to the 2003 accrual budget were actually taken into account. The reimbursement portion which fell into March 2004 was inappropriately ascribed to the 2004 accrual budget, rather than that of 2003, as per new requirements.

Other changes in VAT reimbursement were introduced in 2004 following changes in the method of collecting VAT revenues on imported goods from both the EU and third countries (see main text). Specifically, the increase in opportunities for tax optimisation on VAT by business that EU membership induced triggered the need to identify abuses and unjustified claims. While controls over the quality of VAT claims were reinforced as a result, their implementation required further extension of the 45 days deadline. As in 2003, the 2004 deficit accounts on a cash basis improved.

A further change was introduced in March 2005, this time with a view to rectify the impact of the accrual accounting errors introduced during the previous years. The VAT reimbursements of March 2004 were appropriately booked back to 2003, while in parallel the reimbursements due from March 2005 onward until the end of the year were registered into 2004. With 0.7 and 0.6% of GDP being the sums re-imputed backwardly from the previous years into 2003 and 2004 respectively, the corrections entailed a sharp deterioration of the 2003 deficit on an accrual basis and a slight improvement of the 2004 deficit. The latest round of changes sets the basis for a more permanent switch in the method for VAT reimbursements and has been agreed with Eurostat.

3. POLICIES TO IMPROVE THE HEALTH CARE SYSTEM

One area where spending discipline will become increasingly important is health care. This Chapter describes the structure of the health care system, highlights outstanding weaknesses and considers ways to make financing more stable and sustainable. The slow progress in modernising the health care system is reflected in the low efficiency of hospitals, excessive recourse to inpatient care and heavy prescription of drugs by doctors. The Chapter discusses ways to modernise the hospitals, including options for giving them more scope in managing resources and greater incentives to introduce efficiency enhancing improvements. To help reduce unnecessary use of inpatient services, mechanisms are suggested for strengthening the "gatekeeping" function of general practitioners and for reinforcing controls over treatment decisions. The Chapter also considers ways to contain the cost of subsidies to pharmaceutical companies.

As described in Chapter 1, the broad policy challenge in health care is to increase the efficiency of the system so that it can better deal with the current population's relatively poor overall health status and with the prospect of increased demand and costs in the future. As elsewhere, Hungary faces rapid ageing in the population in coming years which will push up the demand for health services along with the emergence of new drugs and treatment costs. In addition, economic catch-up suggests that growth in demand for services from income effects will also be strong.

Many reforms have been introduced to improve the Hungarian health care system since the early 1990s. These reforms have often endeavoured to bring best practice, for example through the introduction of social insurance principles, mixed public and private ownership, separation of payment and control, increased management autonomy and the rationalisation of primary care services. Nevertheless, due mainly to implementation difficulties achievements so far have been mixed, and there has long been agreement that significantly further improvements in efficiency are required. For example, better cancer screening programs could allow spending reductions in costly treatments thereby facilitating the reallocation of resources to other health care services, including those services related to population ageing, for instance. In short, many of the problems discussed in a special Chapter on health care in the 1999 *Survey* remain and some have become more acute.

Starting with an examination of the organisational structure and performance of Hungary's health care system this Chapter looks at the main problems with the system and draws recommendations for reforms. The policy recommendations are summed up in Box 3.1.

Key features of the health care system

Hungary has a comprehensive insurance-type health care system, based on the principle of social solidarity.[1] Accordingly, compulsory contributions by employees are paid according to earnings, rather than individuals' health risks. Coverage is close to universal in terms of treatments provided, with virtually all citizens benefiting from the service whether they contribute or not. Within this context, however, the system is now radically different from that in place at the beginning of the 1990s, a reflection of the wide ranging structural reforms introduced (Box 3.2). In particular, it is no longer as strongly integrated in the state sector and operates under a purchaser-provider approach.[2]

The publicly funded system provides the majority of medical services

An overview of financing and structure

Health services are financed primarily through the Health Insurance Fund (HIF) run by the National Health Insurance Fund Administration (NHIFA).[3] The Fund receives health care contributions from employers and employees and deficits are covered by transfers from the state budget. The Ministry of Finance prepares the health budget of the HIF in consultation with the NHIFA; subsequently the budget, plus the insurance premium expected to be paid, is voted by Parliament. The fund is used to finance the majority of current (but not capital) spending on health care services, as well as general subsidies on prescription drugs.

Box 3.1. **Policy recommendations for health care reform**

Increasing the efficiency of hospital care

Though substantial reforms have been carried out in hospital care, the results in terms of improved efficiency have been disappointing and further reforms are needed. In particular:

- One problem in the current purchaser-provider system is that it leaves limited scope for the efficient allocation of resources across providers. One important pre-condition to solving this would be to make caps on reimbursements more need-based to take into account local differences in population characteristics. One practical policy option could be to revert to the old system of a capped nationwide inpatient budget, while at the same time distributing the overall budget into regionally defined sub-budgets, which would also be capped. The regional sub-caps could be defined by capitation, i.e. taking into account local health and demographic characteristics. Such initiatives should be complemented by measures to put hospitals under more pressure to co-operate or merge in order to improve cost-effectiveness.
- A complementary measure would be to allow for substitutability between payment systems, for example through the introduction of a payment scale between HDGs (Homogeneous Diseases Groups) performance units, outpatient points and chronic-care points.
- At the same time, individual hospitals could be given more scope in managing resources and greater incentives to make efficiency improvements. Responsibility of owners and managers for deficits and debts needs to be increased and made more congruent with service obligations.
- Matching needs-based treatment choices with more rational equipment structures also requires changing current arrangements on capital spending. One approach would be for new infrastructures to remain under the responsibility of the Ministry of Health or local governments, and depreciation costs and equipment purchases under the control of hospital managers.
- Recent policy initiatives have included the experimental introduction of managed care. However, the experience so far suggests that it would be premature to follow up these steps with a decision to eliminate the point-based system in the near future.

Preventing uneconomic hospitalisation

Relatively easy access to hospital specialists, along with longer periods of hospitalisation and a relatively large number of acute-care beds compared with many OECD countries suggest hospitals play too big a role in the health care system:

- Strengthening "gatekeeping" by general practitioners would contribute to reducing the dominance of hospital care.
- Mechanisms to prevent avoidable recourses to hospitalisation are not very effective. Although some financial and contractual changes have already been made and others are planned, controls by the National Health Insurance Fund Administration (NHIFA) remain mainly confined to verifying that formal reporting criteria are met. The responsibilities of the NHIFA need to be better defined in ensuring good decisions in choices between hospitalisation and outpatient treatment.
- Keeping down expensive treatment costs over the longer term, as well as improving life expectancy, would be helped by more promotion of healthier lifestyles.

Cutting back drug prescriptions

Despite attempts by successive governments to contain pharmaceutical spending through changes in subsidy arrangements, the level of spending remains an ongoing problem:

- Changing general practitioners and specialists into more cost conscious decision makers could help reduce the relatively heavy prescription of drugs. More effort is needed to develop guidelines for the cost-effective use of drugs and to improve the prescription habits of both general practitioners and specialists. In particular a more effective computer system for identifying excessive prescription making by doctors should be considered. An improved system could also be used to identify and diffuse best practices.
- The authorities also need to maintain the current contract with pharmaceuticals companies, so that pressures to remove caps on government subsidies can be resisted.
- The list of products negotiated in pharmaceutical subsidies should be more effectively scrutinised. In particular, greater use of low cost drugs should be considered.

Box 3.2. **Past reforms in health care**

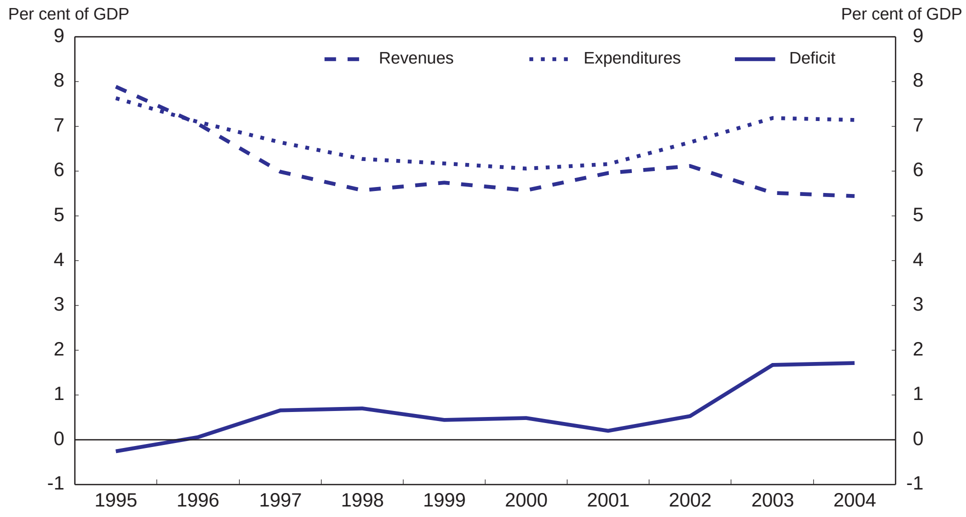
1987:	Experiment on Homogenous Disease Groups (HDG) launched – first in Europe.
	Hungarian Medical Chamber set up.
1989:	Private practice authorised.
1990:	Switch from tax-based funding to compulsory insurance.
	Ownership of health facilities transferred to local governments.
1991:	Establishment of the National Public Health Service (responsibility for local hygiene stations transferred from local governments).
1992:	Social insurance fund divided into a Pension Fund and a Health-Insurance Fund.
	Universal entitlement to health care eliminated by Parliament and conditions for eligibility defined.
	Family doctor network created, allowing free choice for patients; capitation-based payment introduced.
1993:	Voluntary Mutual Health Insurance Fund (supplementary insurance operated by private non-profit institutions) authorised.
	Outpatient-care remuneration based partly on a fee-for-service scheme introduced.
	Hospital-care remuneration on an HDG-type scheme introduced.
1994:	New National Health Promotion Strategy adopted by the Government.
1995:	Hospital capacity reduction programme initiated, with almost 20 000 hospital beds abolished in the period to 1997.
1996:	Restoration of universal entitlement to health care.
1997:	Act on Health Care.
1998:	Abolition of the Health-Insurance Self-Government.
1999:	Pilot projects on managed care launched.
2000:	Privatisation of the practices of general practitioners introduced.
2002:	50% wage increase for health care employees working as civil servants approved (effective in 2003).
2004:	New spending rules set up for hospital and pharmaceutical subsidies to avoid expenditures overruns implemented.
	20% of the population covered by managed care.

Since its creation, the HIF has been almost permanently in deficit (Figure 3.1). It is not uncommon for health and other social funds to be in deficit and to be topped up by transfers from central government. However, because of the high overall social charges and taxation in Hungary, evasion in paying health care contributions (along with other social commitments) was found to be common. In response to this problem, the collection of health insurance was shifted in 2000 from the NHIFA to the national Tax Office.

Capital spending and a number of other aspects of health care are funded directly by the state. This is the case, for example, with some services (such as ambulance services and high tech interventions) along with education facilities for training health care workers (*e.g.* medical universities). The state also supports the cost of drugs by providing subsidies to those on low-income to help them cover co-payments.

The Ministry of Health performs a number of roles in addition to policy formulation, co-ordination and regulation. In 2001 the NHIFA was put under the responsibility of the Ministry. In addition the Ministry oversees a number of bodies that provide services outside the contracting system such as emergency ambulance services and care for elderly and rehabilitation services. One of the most important bodies is the National Public Health and Medical Officer Service (NPHMOS) whose responsibilities notably include control and regulation of health care, including licensing and professional supervision of health care institutions (hospitals and general practitioners' practices). Figure 3.2 summarises the structure of Hungary's health care system.

Figure 3.1. **Revenues and expenditures of the Health Insurance Fund**



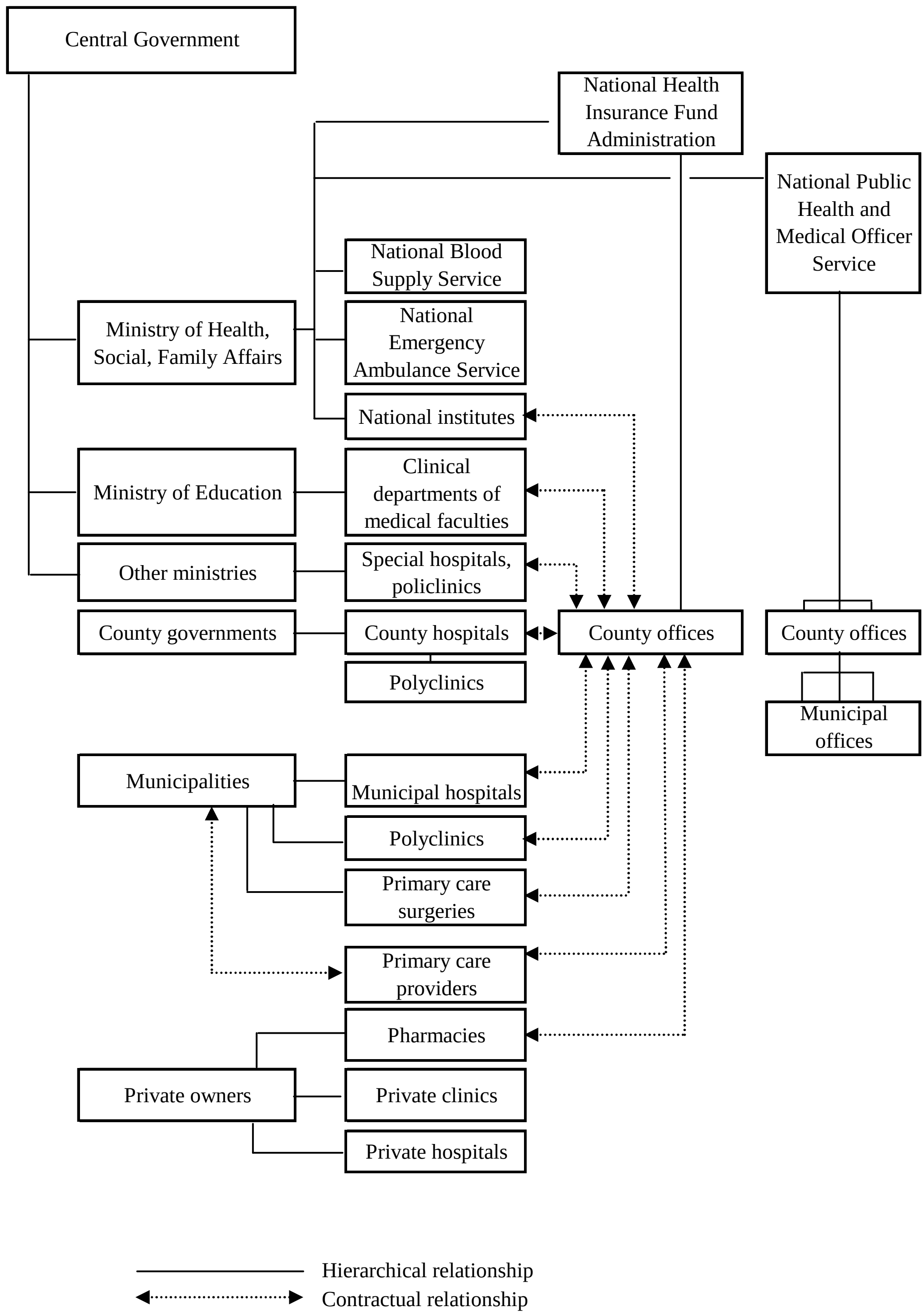
Source: National Institute for Strategic Health Research.

The purchaser-provider system

The purchasing role is performed by the NHIFA which engages in individual contracts across the various groups of providers, namely hospitals, outpatient clinics and independent caregivers. The NHIFA's contracting system is centralised and carried out through a system of sub-funds. There are more than twenty sub-funds (*kassza*), each used for contracts in different types of medical service. For example, there are separate sub-funds for primary care, outpatient specialist care, acute inpatient care, and pharmaceuticals. Health care providers are reimbursed under various payment formulae. Family physicians are paid for primarily by a flat per-patient capitation fee, adjusted for the qualification of the practitioner and the age of the patient. Outpatient treatments are paid through a German-style "*point-system*" and hospital-care is reimbursed according to a Homogeneous Diseases Groups (HDG) system similar to the Diagnosis Related Groups systems seen in the United States (Box 3.3).

As mentioned above, the purchaser-provider contracts are for medical services and do not cover capital expenses. Therefore fees received from NHIFA contracts cover variable costs including notably, the salaries of health care workers and the costs of pharmaceutical products administered by the hospitals. The fees do not cover fixed capital costs imputable to asset depreciation, infrastructure investment and the purchase of medical equipment. These are under the responsibility of the owning institutions (*i.e.* municipalities, counties and ministries), and there is a legal obligation to keep assets in a working order using central budget subsides.

Figure 3.2. **Structure of the health care system**



Source: Gaal, P. (2004), "Health Care Systems in Transition: Hungary", European Observatory on Health Systems and Policies, Copenhagen.

Box 3.3. **Fees in the Hungarian purchaser-provider system**

Primary care is run primarily via a "functional privatisation" type system with contract arrangements between family doctors and other providers (*e.g.* paediatricians) and the NHIFA. About 75% of the revenues received by these practitioners from the NHIFA are paid for from the capitation fees, the reminder coming in the form of a separate fixed maintenance allowance. In order to become eligible for NHIFA funding, family physicians and paediatricians have to service a minimum number of residents. Beyond a certain number of patients, however, capitation payments become regressive so as to discourage excessively large practices and the ensuing provision of poor services.

Outpatient care is funded by a fee-for-service point-scheme, with providers reporting their monthly sum of points to the county office of the NHIFA. Until 2000, performance points were added up nationally, with the related forint value being determined by dividing the national budget by the total number of points earned during the month. This procedure allowed for effective cost containment: as the aggregate number of points increased (fell), the forint value of a point fell (increased), and so total payments for outpatient care remained constant. Since the second half of 2000, however, the forint value of each individual point is fixed in advance and at the beginning of each year a special reserve budget is put aside to offset unexpected additional spending. The forint value of each point is not recalculated until after exhaustion of the reserve fund.

The current version of the HDG system classifies *inpatient care* cases into 736 categories, each category's points being allocated according to the complexity and cost of the medical treatment. The system was set up about fifteen years ago and has been modified several times but problems of over-treatment and excessive payments remain. For part of the 1990s, the overall budget allocated to cover HDG point claims was capped, and, as in the outpatient care financing mechanism, the money value of points fell as the total number of point claims increased. The system was modified in 1998 when a new reserve mechanism was introduced, while at the same time it was decided to change the fixed forint value of points once every 10-12 months, rather than every month as until then. The move to the new system provided hospitals with fewer incentives to improve the efficiency and quality of services. Indeed, hospitals became increasingly focused on quantitative objectives – in order to accumulate point-values – and untenable aggregate spending targets by the NHIFA had to be financed drawing from a special reserve fund. In an attempt to fix these problems a new spending control approach for individual hospitals was introduced in 2004. Under the new mechanism providers are eligible for full reimbursement of up to only 98% of their performance in terms of relative points of the previous year, while for the remaining part they are refunded applying a digressive payment scale. Specifically, each extra-point up to 5% is reimbursed at 60% of its monetary forint value; it is then reimbursed at 30% between 6 and 10%; finally a 10% reimbursement rate applies above that level.

Although the purchaser-provider system changed roles and incentives in the system, municipalities, counties and national government remain key players in health care provision. For instance, municipalities and county governments are responsible for ensuring that all residents have access to the health care services. Moreover, because they own health facilities - such as GP clinics and hospitals - they are responsible for spending on capital and are also involved in the contracting process. Furthermore, one feature of the system is that some government ministries own a hospital, often one of the larger hospitals in Budapest. This is again a reflection of the previous system of health care.

In many respects the purchaser-provider system is failing to deliver a fast pace of modernisation of health care provision. There are, in particular, problems in the hospital sector because of limited scope and incentives for making efficiency improvements. Incentives to stimulate competition between suppliers are low, although purchasing activities run by hospitals are regulated in the law on public procurement. In addition, there is only limited room for making adjustments to pay and working conditions.[4] Most health sector workers are public-sector employees and prior to the 50% public-sector wage increase made between 2001 and 2003 earnings had been falling in real terms. Despite the large wage increase, there are signs of problems in pay that jeopardise motivation and generate supply problems. For instance, even after the recent wage hike doctors appear to be relatively low paid.[5]

Problems of recruitment are widely reported. While Hungary has among the highest specialist-to-population ratios, the ratios for both nurses and physicians are relatively low, suggesting a bias towards very high-skill health care workers (Table 3.1). There is an acute shortage of nurses, a problem exacerbated by the growing demand for nurses in countries which can offer better pay and conditions. In addition, though the total number of specialists is high, there are shortages in some areas, because hospitals do not have the flexibility to adjust pay and conditions appropriately. The shortages are mainly in specialist areas that do not receive under-the-table payments (so called "gratitude money", which is widespread, albeit illegal): anaesthesiologists, pathologists, radiologists, for example.

Table 3.1. **Health-sector employment in the OECD**

Per 1 000 population

		Physicians		General practitioners		Specialists		Nurses
1	Greece	4.5	Belgium	2.1	Greece	3.0	Ireland	15.3
2	Italy	4.4	Finland	1.7	Czech Republic	2.5	Iceland	14.0
3	Belgium	3.9	France	1.6	**Hungary**	**2.5**	Netherlands	12.8
4	Iceland	3.6	Australia	1.4	Germany	2.3	Luxembourg	10.8
5	Slovak Republic	3.6	Austria	1.4	Portugal	2.3	Switzerland	10.7
6	Switzerland	3.6	Germany	1.1	Denmark	2.2	Norway	10.4
7	Czech Republic	3.5	Canada	1.0	Sweden	2.2	Australia	10.4
8	Austria	3.3	Italy	0.9	Switzerland	2.2	Germany	9.9
9	Denmark	3.3	Luxembourg	0.9	Norway	2.1	Denmark	9.7
10	France	3.3	Norway	0.9	Austria	1.9	New Zealand	9.4
11	Germany	3.3	United States	0.8	Poland	1.9	Czech Republic	9.4
12	**Hungary**	**3.2**	Czech Republic	0.7	Belgium	1.8	Canada	9.4
13	Portugal	3.2	Denmark	0.7	Spain	1.8	Austria	9.3
14	Finland	3.1	**Hungary**	**0.7**	France	1.7	United Kingdom	9.2
15	Netherlands	3.1	Iceland	0.7	Luxembourg	1.7	Finland	9.0
16	Norway	3.0	New Zealand	0.7	United States	1.6	Sweden	8.8
17	Sweden	3.0	Turkey	0.7	Finland	1.5	**Hungary**	**8.5**
18	Spain	2.9	Ireland	0.6	Slovak Republic	1.5	Japan	8.2
19	Luxembourg	2.6	Mexico	0.6	United Kingdom	1.5	United States	7.9
20	Australia	2.5	United Kingdom	0.6	Australia	1.2	France	7.2
21	Ireland	2.4	Netherlands	0.5	Canada	1.1	Spain	7.1
22	United States	2.4	Portugal	0.5	Netherlands	1.0	Slovak Republic	7.1
23	Poland	2.3	Sweden	0.5	Mexico	0.9	Belgium	5.6
24	Canada	2.1	Slovak Republic	0.4	New Zealand	0.7	Italy	5.4
25	New Zealand	2.1	Switzerland	0.4	Turkey	0.6	Poland	4.8
26	United Kingdom	2.1	Poland	0.1	Iceland	..	Greece	4.0
27	Japan	2.0	Greece	..	Ireland	..	Portugal	3.8
28	Korea	1.5	Japan	..	Italy	..	Mexico	2.2
29	Mexico	1.5	Korea	..	Japan	..	Turkey	1.7
30	Turkey	1.3	Spain	..	Korea	..	Korea	1.7

Source: OECD Health Data 2004, 3rd edition. The Sources and Methods Section of the OECD Health Data points to certain limits in the comparability between countries of the data referred to in this table.

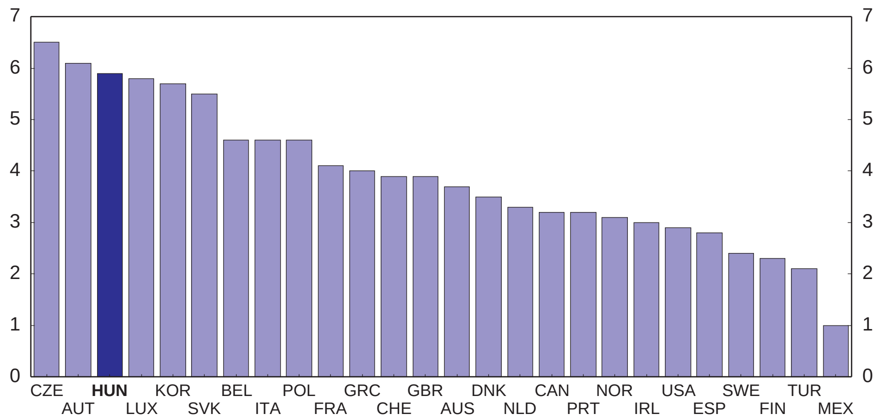
Problems in hospital care are amplified by weak progress in preventing uneconomic access to hospital services, so that hospital care remains overly dominant in the system. In particular the exploitation of cheaper outpatient alternatives to hospital care has been limited and, reflecting the high number of specialists, patients have relatively easy access to hospital consultations.

Moreover, the lack of "light" care facilities, combined with the scarcity of nurses and finally the abundance of some specialists, generates the pernicious effect of long patient stays in hospital. In particular, patients often remain long in hospitals because nursing homes for day-to-day treatments are scarce, a situation that greatly complicates the care for the elderly and their rehabilitation. Although the average length of hospital stays has been brought down somewhat over the years, Hungary still ranks relatively high in this respect. Lengthy hospitalisation means the system is under constant pressure to use a large number of beds (Figure 3.3). All-in-all, these factors keep the modernisation of hospital care on hold,[6] even though several measures have been introduced in 2004 to encourage the provision of higher quality rehabilitation services. In particular, the professional certification system has been rationalised and financial incentives to rehabilitation activities have been introduced, together with the launching of an ambitious hospice programme. When allocating surplus resources providers are encouraged to give priority to rehabilitation care and day-to-day treatments.

Furthermore, the Hungarian health care system suffers problems of resource misallocation. This is signalled by Figure 3.4 which shows that there are wide gaps across regions in the supply of coronary artery bypass surgery, which is a key indicator of service levels.[7] In effect, hospitals in certain regions attract a disproportionate share of resources as well as patients. The size of the gap is particularly marked relative to Budapest, whose residents have the highest health status but also access to most hospital facilities. This is partly because residents of other regions are often treated in Budapest and in other major centres but it is widely thought that there are nevertheless underlying problems in resource allocation. Getting resource allocation right in Hungary is complicated by strong disparities in health status within regions, a phenomenon particularly marked in areas characterised by a high density of Roma inhabitants who usually have a worse than average health status.

Figure 3.3. **Acute care beds**

Per 1 000 population, 2002[1]

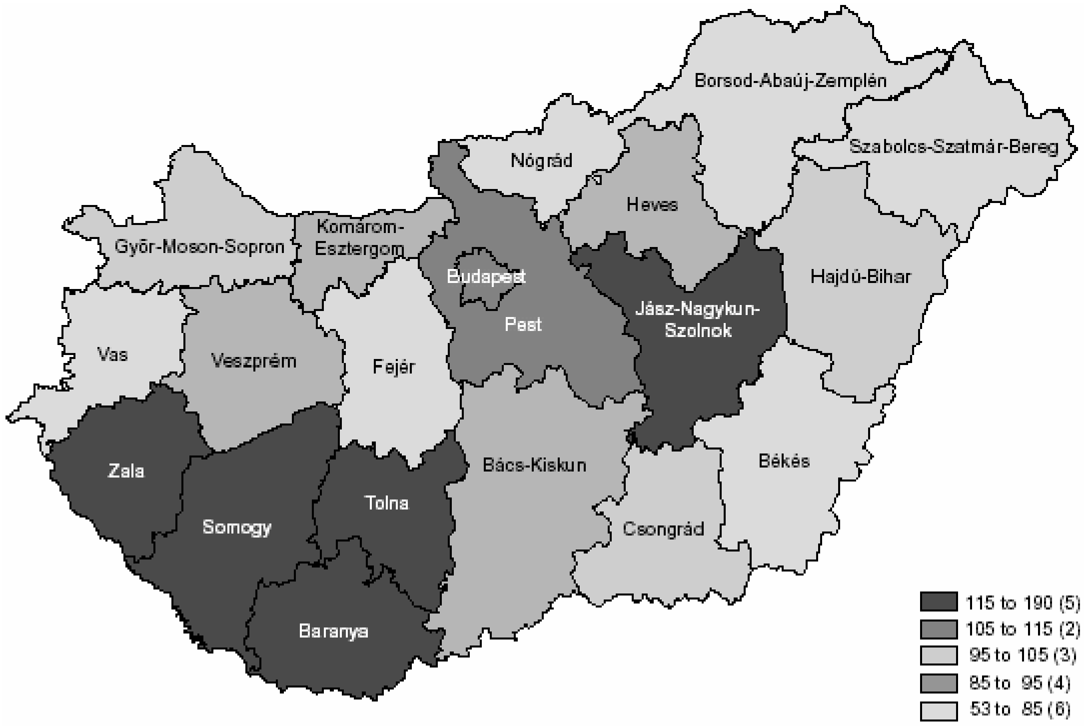


1. 1997 for Belgium, 2000 for Denmark, France, Greece, Spain and Sweden, 2001 for Australia, Canada, Italy, Netherlands and Portugal.

Source: OECD, Health database 2004, 3rd edition.

Figure 3.4. **Coronary artery bypass grafts by region**[1]

Percentage of national average



1. 2003 figures.

Source: Ministry of Health (2004), "Public Health Report".

The system of drugs subsidy

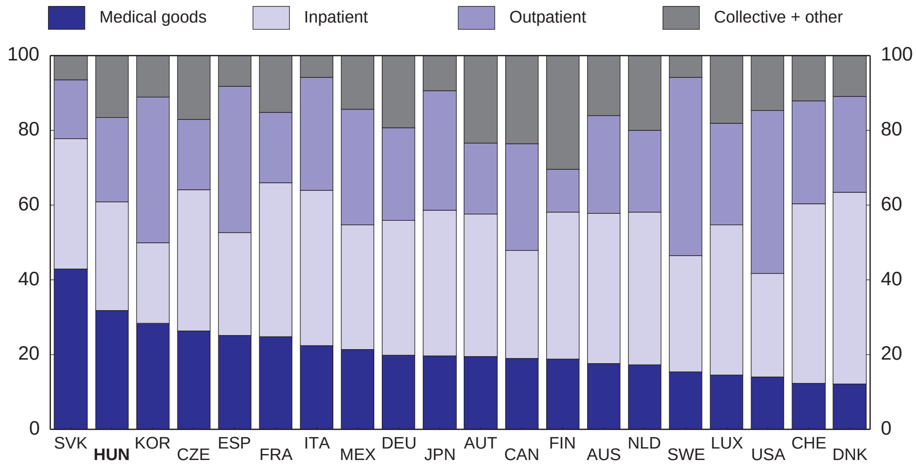
Overspending of the pharmaceutical sub-budget, linked to a high share of pharmaceutical spending in total health expenditure, remains an ongoing problem in the health system. Hungary spends more than 30% of total health expenditure on medical goods (Figure 3.5). In this regard, Figure 3.6 suggests that high and increasing pharmaceuticals expenditure represents a major policy problem. Indeed, such expenditure makes for 31% of total Hungary's spending in health care, with Hungary ranking second in the OECD in terms of consumption of these products as a share of total health spending (from third in 1990).[8]

Various attempts have been made by successive governments to contain pharmaceutical spending through changes in subsidy arrangements. The current system dates from 2004 when the government negotiated a two-year agreement with producers. The government initially proposed cutting the administered prices of drugs by 15% across the board but subsequent negotiation with producers resulted in an alternative solution. In the agreement reached, a 5% maximum annual increment in the state budget for financing pharmaceutical expenses was defined for 2005 and 2006. Any medicine expense above the given level is supposed to be paid jointly by the state and the producers according to a risk-sharing scheme involving a regressive government contribution. Specifically, annual pharmaceutical sub-budgets were set at HUF 270, 285 and 296 billion, respectively for 2004 and the following two years. For each HUF 3 billion pharmaceutical spending in excess of budgeted levels, the state subsidy will decrease by 10%, implying that beyond HUF 30 billion no subsidy will be paid.

Although the agreement is less restrictive than the government's original proposal, pressure by some producers to revise the subsidy limits upwards continue to be strong.

Figure 3.5. **Health expenditure by type of service**

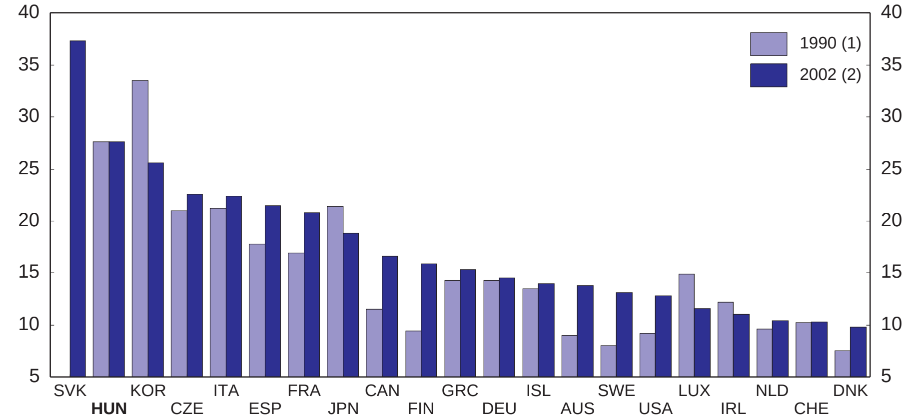
Percentage of total health expenditure, 2002[1]



1. 2001 for Australia and Japan.
Source: OECD, Health database 2004, 3rd edition.

Figure 3.6. **Pharmaceutical expenditures**

Percentage of total health expenditure



1. 1991 for Hungary.
2. 2001 for Australia, Iceland and Japan.
Source: OECD, Health database 2004, 3rd edition.

Private-sector inpatient services have yet to develop

Legal provisions allowing private services to operate have been in place since 1990 and, most notably, private provision is now used in a significant share of outpatient care. Contracts set up by the NHIFA involve a number of private service providers: family doctors; suppliers of outpatient equipment and office spaces; pharmacies; and specialised medical providers, notably providers of magnetic resonance imaging and kidney dialysis. The presence of these private providers has contributed to increases in the amount of non-subsidised private spending on health. Figures for 2002 suggest about half the total outpatient spending was either in this form of health spending or in co-payments for subsidised drugs or “gratitude money”.

Outside these services there are only a small number of privately owned clinics, which are typically run by salaried medical professional in the public system. Further expansion appears slowed by the high number of services covered by the NHIFA, although additional private health insurance funds are available and their subscribers benefit from generous tax exemptions. The clinics’ services are in fact mostly used by foreign residents.

How to promote a needs-based and cost-efficient health care system

Important structural measures have been introduced over the years to encourage flexibility in the health care system and its responsiveness to market signals. However, as the previous sections have discussed, results thus far have been mixed; they point to the need to tackle a number of specific distortions and outstanding implementation problems. The broad challenge facing Hungary’s policy makers is to adopt a co-ordinated approach to improving the performance of the health care sector, that takes into account the interactions and complementarities between different providers and so increases the overall efficiency of resource allocation. Furthermore, effective identification of both current and future sources of pressure on health care is essential, especially in light of the likely strong demand increases in the future.[9] Within this broad framework, steps announced in May 2005 as part of the Hundred Steps programme indicate the authorities’ intention to move along some of the lines recommended in the following sections (see Annex 3.A1).

Increasing the efficiency of hospital care

One problem in the current purchaser-provider system is that it leaves limited scope for the efficient allocation of resources across providers. The new spending control approach introduced for individual hospitals in 2004 was a step in the right direction (Box 3.3), even though significant further improvements are required to constrain spending pressures. One important pre-condition to solving this would be to make caps on reimbursements more need-based to take into account local differences in population characteristics. One practical policy option could be to revert to the old system of a capped nationwide inpatient budget, while at the same time distributing the overall budget into regionally defined sub-budgets, which would also be capped. The regional sub-caps could be defined by capitation, i.e. taking into account local health and demographic characteristics. Such initiatives should be complemented by measures to put hospitals under more pressure to co-operate or merge in order to improve cost-effectiveness.

A complementary measure would be to allow for substitutability between payment systems, for example through the introduction of a payment scale between HDGs performance units, outpatient points and chronic-care points. Making hospitals feel that they can organise their activities more freely in the provision of treatment would be the primary objective of this measure. Such a move would also contribute to allowing hospitals to adjust their workforce according to needs. Moreover, care treatments would be chosen based on the application of economically viable medical parameters and not just as part of the effort to accumulate reimbursement points.

At the same time, individual hospitals could be given more scope in managing resources and greater incentives to make efficiency improvements. Responsibility of owners and managers for deficits and debts needs to be increased and made more congruent with service obligations. This change would open the way to increasing control over investment decisions, reducing reportedly widespread problems of political interference in capital spending and improving co-ordination between capital spending and service provision. Moreover, it would give more freedom in wage setting and the design of labour contracts, allowing more performance-related contracts to be used. As a consequence, the problems posed by the current imbalances in the structure of hospitals' labour forces would become easier to remedy. For example, it would be easier to shift towards fewer specialists and to increase the number of nurses as part of steps towards shortening the average length of hospital stays and reducing the number of acute-care beds. Furthermore, greater autonomy of hospitals would facilitate the implementation of stricter and more transparent accounting practices. Experience in other OECD countries shows that making the hospitals more accountable also has a positive impact on efficiency because this increases attention by hospital management to the quality of services. Overall, this approach would help towards a more even allocation of hospital services.

Matching needs-based treatment choices with more rational equipment structures also requires changing current arrangements on capital spending. One approach would be for new infrastructures to remain under the responsibility of the Ministry of Health or local governments, and depreciation costs and equipment purchases under the control of hospital managers. For example, depreciation costs could be included in fee payments under purchaser-provider contracts, accompanied by the requirement that these payments are placed in ad hoc created capital funds that could only be drawn on for equipment purchases. In principle, this measure should also result in hospital managers taking better decisions on the balance between standard and advanced equipment; this aspect of hospital management is regarded as particularly weak at present. Giving the service providers more responsibility in capital-equipment purchases would also help widen the range of suppliers and ensure that equipment is bought at competitive prices.

Recent policy initiatives have included the experimental introduction of managed care. However, the experience so far suggests that it would be premature to follow up these steps with a decision to eliminate the point-based system in the near future. Under managed care schemes, service providers find a strong incentive to improve overall efficiency because they are allowed to share out any surpluses remaining from budget allocations (Box 3.3). However, the experience so far has shown that key capacities needed to make managed care work well are not yet sufficiently developed in Hungary.[10] In particular the IT system for running managed care is already at full capacity and a substantial investment in developing more administrative staff with skills in running managed care systems is needed. Although these costs are difficult to estimate with precision, having managed care implemented on a large scale would presumably push the administrative costs of the NHIFA significantly above the present 2% of total operating costs. Consequently, further expansion of managed care should be gradual to ensure that enough savings are generated to reward providers of managed care services for the efficiency gains they have achieved. These considerations suggest that the government has been right in its 2005 decision to temporary slowdown the phase in of the managed care system.

However, wider implementation of managed care over the long term does not necessarily mean the publicly financed single-purchaser system should be abandoned. A strategy of moving to multiple providers (for example on a regional basis) alongside the introduction of managed care is under consideration. However international experience suggests that efforts should rather be put on trying to enhance the effectiveness of the single purchaser. The latter can use its monopsonistic power to closely monitor service provision and, based on comparisons, pressure caregivers into following best practices. There are *a priori* no reasons to expect that in the future the NHIFA will not perform these functions efficiently, provided that its tasks become clearer (see below), and its employees are encouraged to pursue more goal-oriented objectives. The recent finalisation of a new hospital database by the NHIFA is a step in the right direction; it will improve the capacity of the NHIFA to develop quality indicators, identify best practices and encourage hospitals to converge towards them.

Box 3.4. **Managed care in Hungary**

Inspired by the British Fund Holding model and the American managed care system a pilot project in managed care was launched in 1998. Eighteen managed care groups have been created since then and provide health care services to more than 2 million people (around 20% of the population). Similar to arrangements in other countries, the projects give health care providers the opportunity to organise themselves territorially, taking responsibility for the whole spectrum of care over a population group comprising some 200 000 residents. The health care providers potentially eligible to become "care co-ordinator organisation" can be a hospital or a polyclinic, or even a group of family doctors. For example, when the co-ordinator is a hospital or a polyclinic, it has to enter a contract with the general practitioners and their registered residents define the population covered by the co-ordinating organisation.

Financially, the budget of the co-ordinator is defined according to the population covered, rather than the extent of the service provided, as under a classical HDG mechanism. In addition, the co-ordinator has discretion in the use of any surpluses; these, for example, can be used for remuneration or investment purposes, thus providing incentives for efficiencies in the coordinator's own activities as well as the providers it contracts with. As elsewhere, a key aim in introducing managed care is to induce efficiency gains through better co-ordination between primary and secondary care, notably through better "gatekeeping" by doctors.

Preventing uneconomic hospitalisation

Patients have a tendency to visit the hospital specialist directly when in many cases cheaper and more effective care treatments are available at the primary level of the system. *Strengthening "gatekeeping" by general practitioners would contribute to reducing the dominance of hospital care.* Past steps to improve gatekeeping have been welcome, including making visits to some specialists conditional on stricter prior-to-visit referrals provided by the general practitioners. However, the list of exemptions to these rules is still long and could be reduced along with the introduction of stronger penalties on GPs for non-compliance.

In addition, mechanisms to prevent avoidable recourses to hospitalisation are not very effective. Although some financial and contractual changes have already been made and others are planned, controls by the NHIFA remain mainly confined to verifying that formal reporting criteria are met. The responsibilities of the NHIFA need to be better defined in ensuring good decisions in choices between hospitalisation and outpatient treatment. One potential source of problems is that, quality-assurance tasks are split between the NHIFA and the NPHMOS, and the division of responsibility is ill defined. In addition, the incentives among staff in these institutions who examine the quality and efficiency of medical decisions are weak and could be strengthened by the use of performance-based pay. More recently, the government has been encouraging the creation of Regional Health Councils but their mandates, as well as the division of responsibilities with the NHIFA, are not well specified. The mandates of the Council could also include promoting new forms of co-operation between neighbouring small hospitals, which has to date been rather weak. Greater co-operation would also facilitate the much needed transformation of small local hospitals into nursing homes.

Keeping down expensive treatment costs over the longer term, as well as improving life expectancy, would be helped by more promotion of healthier lifestyles. There is a need for educational programmes more explicitly targeted to families, the aged and children. International experience suggests that general practitioners and public health professionals could play an important awareness role in this regard.

Cutting back on drug prescriptions

Changing general practitioners and specialists into more cost conscious decision makers could help reduce the relatively heavy prescription of drugs. More effort is needed to develop guidelines for the cost-effective use of drugs and to improve the prescription habits of both general practitioners and specialists. In particular a more effective computer system for identifying excessive prescription making by doctors should be considered. An improved computer system could also be used to identify and diffuse best practices. More importantly, the authorities should resist pressures for the removal of caps on the subsidies paid to pharmaceutical companies. On the contrary, these caps should be extended beyond 2006, and strengthened if spending developments turn out to be stronger than initially expected. In addition, the authorities also need to maintain their current contact with the pharmaceutical companies, so that pressures to remove caps on government subsidies can be resisted. In particular, greater use of low cost drugs should be considered.

Notes

1. See OECD (2004) for a wider discussion of health care systems in the OECD countries. Building on international experience and grounded in new data on cross-country differences, this study also offers a contemporary roadmap to improving performance.

2. See Orosz and Burns (2000) and Gaál (2004).

3. See also Boncz, Nagy, Sebestyén and Kőrösi (2004).

4. See Rethelyi, Miskovits and Szocska (2002).

5. See OECD (2005a).

6. Moreover, this framework exacerbates the donation of "gratitude money", insofar as families feel that they have to give more money away to the specialists in exchange for elderly relatives to spend longer periods in hospital. See Kornai (2000) for a broader discussion of the phenomenon of "gratitude money".

7. It should be considered, however, that, although Figure 3.4 captures mainly the capacity of the health care system to supply services, the disparities that it highlights may also reflect differences in demand conditions.

8. See for a background discussion Gulácsi, Dávid and Dózsa (2002).

9. In this regard, see Bains and Oxley (2005) and OECD (2005b) for a cross-country comparative discussion of ageing-related sources of pressures.

10. See Mihályi (2004) for a discussion of Hungary's experience with managed care.

BIBLIOGRAPHY

Bains, M. and H. Oxley (2005), "Ageing-related Spending Projections for Health and Long-term Care", *Towards Higher-Performing Health Systems: Policy Studies from the OECD Health Project*, OECD, Paris (forthcoming).

Boncz, I., J. Nagy, A. Sebestyén and L. Kőrösi (2004), Financing of Health Care Services in Hungary, *European Journal of Health Economics*, 5(3), pp. 252-258.

Gaál, P. (2004), *Health Care Systems in Transition: Hungary*. WHO Regional Office for Europe on behalf of the European Observatory on Health Systems and Policies, Copenhagen.

Gulácsi, L, T. Dávid and C. Dózsa (2002), "Pricing and Reimbursement of Drugs and Medical Devices in Hungary", *European Journal of Health Economics*, 3(4), pp. 271-278.

Kornai, J. (2000), "Hidden in an Envelope: Gratitude Payments to Medical Doctors in Hungary", *Paper for the Festschrift in honour of George Sorors*.

Mihályi, P. (2004), "HMO Experiment in Hungary-A Unique Road to Healthcare Reform", available at http://papers.ssrn.com/.

OECD (2004), *The OECD Health Project, Towards High-Performing Health Systems*, OECD, Paris.

OECD (2005a), *Health Data 2005*, OECD, Paris (forthcoming).

OECD (2005b), *Long-term Care Policies for Older People*, OECD, Paris (forthcoming).

Orosz, E. and A. Burns (2000), "The Healthcare System in Hungary", *OECD Economics Department Working Papers*, No. 241, OECD, Paris.

Réthelyim, J., E. Miskvits and M.K. Szócska (2002), "Organisational Reform in the Hungarian Hospital Sector", *Health, Nutrition and Population (HNP) Discussion Paper*, World Bank.

ANNEX 3.A1. MEASURES PROPOSED IN THE HUNDRED STEPS PROGRAMME ON HEALTH CARE

As discussed in Chapter 1, in April 2005 as part of the so called Hundred Steps programme, the government begun to announce a large number of structural reform measures. This annex presents the measures proposed in the domain of health care, based on available information provided by the Ministry of Finance in mid-June 2005.

Towards faster emergency services

1. Emergency wards and central emergency facilities in areas where such services are in short supply at present will be established.

2. Helicopter depots will be built. Their location will be chosen in such a way to ensure that the whole country becomes accessible to emergency services.

3. 40 Critical Care ambulances and 80 Advanced Life Support ambulances will be purchased. The equipment used in emergency services will be upgraded.

A program to tackle cancer will be initiated

4. A National Anti-Cancer Program will start this year, including widespread use of cancer screening tests.

5. Radiation therapy equipment of regional and county oncology centres will be upgraded and the construction of a central western Hungary oncology centre will begin.

6. All patients affected by cancer will receive treatment in qualified therapeutic institutions, including those living in less accessible areas.

Primary care and specialised outpatient care

7. Financing of the health care system will be made more flexible. Changes include the opening up of a financial channel between the inpatient and outpatient funds, which are separated at present. A unified therapeutic/prophylactic fund will also be established.

8. To improve the standards of primary care, the establishment of practitioners' communities – in which several primary care physicians work in cooperation – will be supported. A uniform system for primary care physicians is to be set up consisting of a central on-call service. A separate practice fund will be established so as to help general practitioners buy the practices of doctors who are approaching retirement. This will help reduce problems of interrupted service provision. While setting capitation rules, greater consideration will be given to differences in the health status of residents in different regions, and to individual physical conditions.

The prescription and consumption of pharmaceuticals

9. Incentives will be offered to doctors who prescribe cheap pharmaceutical products (conditional on the ingredients and the drug are he same).

10. Rules concerning the promotion and advertising of pharmaceuticals are to be tightened. This will allow the reduction of not only avoidable consumption, but also any interest doctors may have in prescribing one specific brand among several that have identical effects.

11. More effort to ensure free medication to the indigent who live in the most difficult circumstances.

Differences in medical treatment and equality of access to health services

12. A system of professional requirements ensuring that the health insurance provider enters into contracts with the service providers that offer the best care is to be established. Continuous monitoring of care services provided will also be ensured.

13. The steps through which patients access different levels of care will be precisely defined.

The health care contribution system

14. A new accounting system enabling the monitoring of individual payments is to be introduced.

15. Entitlement and payments will also be monitored more effectively.

16. The system of collecting contributions and of collecting overdue payments will be improved.

17. As a mean of increasing health care contributions, measures to force employers to hire workers on a legal basis are to be reinforced.

18. A “real” contribution payment will be achieved for every single insured person.

Turning the health care system into a fair one

19. A basic package of services for persons who do not have insurance will be designed (emergency care, public health services, mother and infant protection).

20. The package of insured health care services to which every insured party is entitled will be precisely defined.

21. Any extra services will be provided either at full cost or through supplementary or market insurance.

4. RAISING THE EMPLOYMENT RATE

The Hungarian government is conducting a series of reforms to tackle the low employment rate through tax and welfare reform. This Chapter first looks at measures taken recently to lower the tax wedge on labour through reductions in employers' non-wage labour costs and reductions in personal income tax. In welfare reform, ongoing efforts to reduce the very large numbers of people on disability benefit are examined and the policy options for further reform in sickness pay and early retirement schemes are considered. The Chapter also considers whether reforms that cut generosity and restrict eligibility should be balanced by increased generosity in unemployment benefit to encourage more of the non-employed to engage in job-search activities. A final section of the Chapter looks at whether additional policy actions can be taken to improve transport networks for commuters and increase the level of labour mobility between regions.

Previous and ongoing efforts to reduce labour costs and reform the welfare system appear to be paying off but only slowly; the employment rate has been increasing over the past several years but nevertheless remains among the lowest in the OECD and there is considerable room for further increases (see Chapter 1).[1] The low employment rate is in part because the tax wedge on labour remains fairly high, despite on-going efforts to reduce it. This weakens both labour demand and supply and also encourages employers and employees to look for ways to avoid the wedge, for example through grey-sector activity. Problems in the welfare system also contribute to low labour utilisation, in particular a lot of the non-employed are either on benefit schemes that take them out of the labour market or are in early retirement. This Chapter looks at the recent policy measures to address these issues and also examines the policy issues relating to the mobility of labour, which is often considered to contribute to problems in labour market adjustment. The policy recommendations are summed up in Box 4.1.

Bringing down the tax wedge: some questionable implementation strategies

Although there are continuing efforts to reduce the tax wedge on labour, particularly for those vulnerable to unemployment, the wedge nevertheless typically drives a large gap between what employers pay in wages plus non-wage labour costs and employees' net earnings. Part of the wedge comprises contributions by employers and employees to pension, sickness and unemployment funds. Employers also pay a lump-sum health care contribution and a proportional training contribution. Employees of course also pay income tax but also receive cash transfers. Though most contributions to social funds are expressed as a percentage of gross earnings, there are caps which result in falling percentage contribution rates beyond certain levels of earnings. The tax wedges are nevertheless typically very high for middle and upper-income earners. Indeed, simulations show tax-wedges for households without children earning average, or above-average incomes remain among the highest in the OECD (Table 4.1).[2] For low income earners there has been some welcome reduction in the wedges but they also still remain high in international comparison. For example, the calculations show that for a single earner on two-thirds the average wage, the tax wedge has fallen from 46% to 42% of total labour costs between 2000 and 2004. Even so, the wedge for this type of household is 8th highest in the OECD area and 9 percentage points above the OECD average. The main reason why wedges remain high is that fiscal pressures are restricting room for the authorities to make substantial across-the-board cuts and this will continue to be the case without significant cuts in public spending, though effective tax-broadening measures could also finance tax rate cuts to some extent

The most important steps taken by the current government to reduce the wedge on the employer's side have been:

- Phasing out of the employers' lump-sum health care contribution. Because the contribution is a fixed amount per employee it has added a regressive element to the tax wedge – making wedges as a percentage of the wage larger for low levels of earnings. In particular, the contribution has in the past been one factor dissuading part-time employment. The phase out began in 2003 and last year the contribution was eliminated for part-time workers on parental leave and for the long-term unemployed aged over 50 taking up work.[3] This year the contribution has been reduced for all employees by HUF 1 500 to HUF 1 950 (equivalent to about 3.5% of the minimum wage) and it will be completely eliminated in 2006.

- Targeted cuts in employers' social contributions. From this year on, employers can get refunds on up to half the social contribution rate (14.5% instead of 29%) on pensions, sickness and unemployment funds when hiring three types of employee: young job-seekers, those returning to work after parental leave and long-term unemployed aged over 50.[4] The refunds are capped at relatively low levels, thus limiting the deadweight loss generated by cases where employers are getting rebates for employees they would have willingly employed anyway (*e.g.* highly skilled professionals returning to work after a period of childcare). Proposals for further cuts in employers' social security contributions have been outlined in the Hundred Steps programme (see Annex 4.A1).

Box 4.1 **Policy recommendations for raising the employment rate**

Bringing down the tax wedge

Though fiscal pressures are making it difficult for the authorities to make substantial across-the-board cuts in the tax wedge, some further reductions are being made. However, these would benefit from some fine-tuning and changes in approach, in particular:

- The strategy on personal income tax reductions should be re-thought. In particular, the special allowances for employees could be scrapped and replaced with a universal tax allowance. A universal allowance would of course reduce taxes across all income groups, but this could be offset by smaller tax-bracket increases than those currently proposed for 2007 and beyond in the Hundred Steps programme.
- Though measures in the Hundred Steps programme intend to improve the composition of family support in the tax-benefit system, the authorities should nevertheless reconsider the exceptionally high level of family support delivered via taxes and benefits – there may be more efficient ways of reaching family policy objectives.

Reforms to the welfare system and pensions

The Hungarian authorities are continuing to take steps to improve the work-orientation of the welfare system. However, in some areas the authorities need to be particularly careful in developing policy, while in others bolder steps are needed, notably:

- In designing rehabilitation schemes and other measures to get more people currently on disability benefits back into jobs, the authorities should take a close look at experiences elsewhere and be cautious in introducing new measures, especially those that require additional resources. The authorities should anyway continue tightening the screening procedures for entering disability.
- Further measures should be taken to cut back on abuse of sickness pay rules that allow people to continue on sickness pay while unemployed. Payouts should be brought in line with unemployment benefit and granting of the discretionary 3-month prolongation of sick pay for the unemployed should be limited and further cuts in the standard extension should also be considered.
- Increased generosity in the relatively low unemployment benefit could possibly be used as a positive counterweight to the measures suggested above. One way of retaining some of the advantages of the current benefit level while dissuading application to other benefit schemes would be for benefit to start relatively generous but be reduced over time (measures announced in the Hundred Steps programme suggest the authorities are already moving in this direction). It may also be advantageous to extend the length of unemployment benefit so as to encourage contact with the labour market.
- Though the Job Search Allowance scheme does not appear to be working well in its present form, the international evidence is that mutual-obligation schemes of this sort can work well and the authorities should investigate what adjustments could be made to improve the scheme's effectiveness.
- In early retirement, the authorities should consider phasing out the Advanced Retirement Pension while maintaining the Reduced Advanced Retirement Pension but with reformulation of the pension adjustments.

Tackling low labour mobility

Regional differences in employment rates are large. While market forces should naturally soften these disparities over time, policy also plays a role in both regional and local labour mobility**:**

- In transport infrastructure there is strong policy attention to motorway construction but there has been rather weak progress in urban transport systems. Indeed it is questionable whether sufficient progress can be made within the current structure of urban transport policy and the authorities should consider alternative structures that improve the cohesion between responsibility, administration and financing.
- The authorities should explore whether there are impediments to the development of rental low-cost housing markets in high growth regions.

Table 4.1. **Total tax wedges in Hungary**[1]

	Value of tax wedge		*of which*		Hungary's rank position[2]		Average across countries		*Difference with Hungary*	
	2000	2004	*Employee component including cash transfers*	Change in the total wedge 2000 to 2004	2000	2004	2000	2004	2000	2004
Household type										
Single, 167% average wage, no children	56	56	40	-0.6	3	3	42	41	15	14
Single,100% average wage, no children	50	46	26	-3.8	3	5	37	37	13	9
Single, 67% average wage, no children	46	42	19	-4.7	4	8	33	33	13	9
Married, two earners, one 100% the other 33% average wage, no children	48	44	23	-3.4	3	4	34	34	13	11
Married, two earners, one 100% the other 67% average wage, 2 children	39	35	11	-4.0	10	12	32	31	8	4
Married, two earners, one 100% the other 33% average wage, 2 children	37	33	7	-3.1	10	14	29	29	7	5
Married, one earner, 100% average wage, 2 children	35	31	6	-3.7	10	12	27	27	8	5
Single, 67% average wage, 2 children	22	22	-8	-0.1	12	13	18	17	5	5

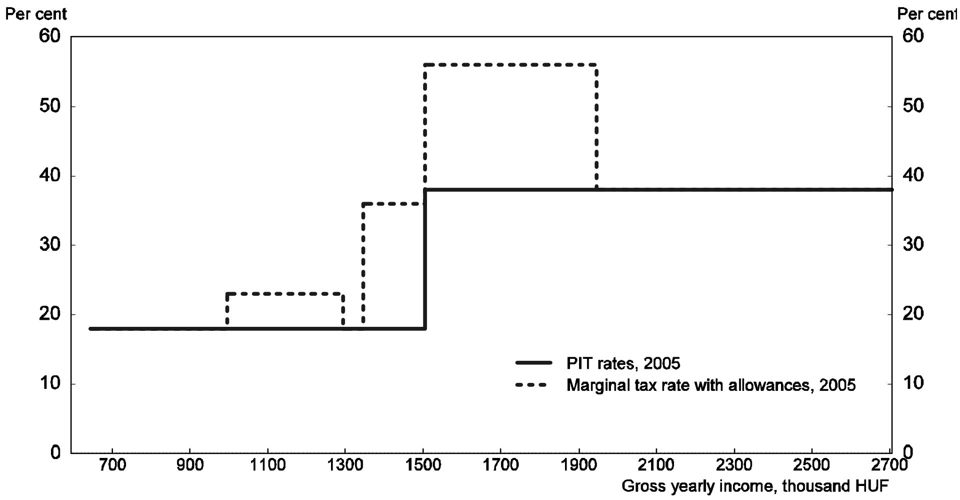
1. Including cash transfers to households.

2. For example the number 3 means that Hungary has the 3rd highest tax wedge among the OECD countries available for comparison.

Source: *OECD Taxing Wages* (2004).

For employees, cuts in personal-income taxation for both low and high income groups have been made, and more are being proposed (see Annex 4.1). At the lower end of the income distribution, two special allowances mean that those earning the minimum wage pay zero tax.[5] The allowances also reduce the taxation of earned income above the minimum (up to gross earnings of HUF 1.94 million per year). However, the phase-out schedules of the allowances significantly increase marginal tax rates for many households; often pushing them way above the top rate of personal income tax (Figure 4.1).

Figure 4.1. **Impact on marginal tax rates of the employee allowances**



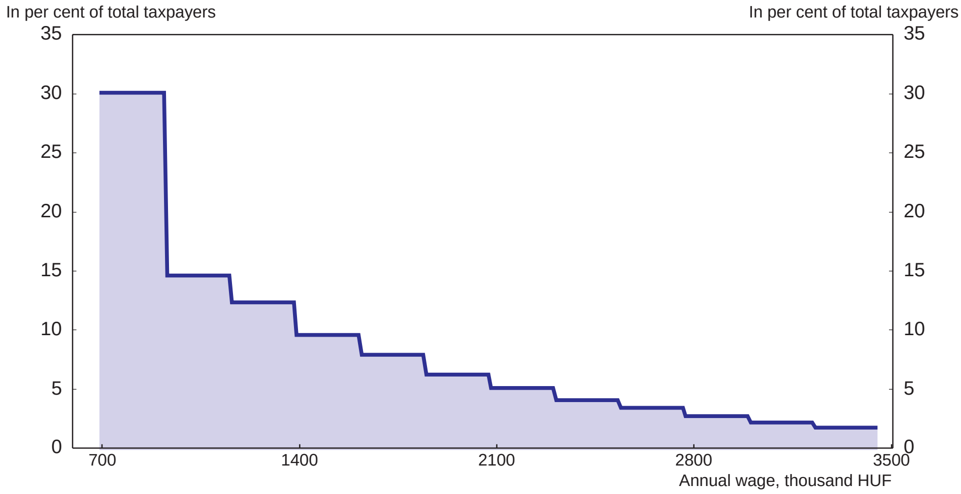
1. The calculation assumes a single earner household with no other tax deductions. See main text for further detail.

Source: Ministry of Finance.

There have also been cuts in personal income tax for middle and upper income earners. In 2005 the personal-income-tax schedule has been reduced from three to two rates by the elimination of the 26% rate. This move, which was combined with bracket changes, has had the effect of lowering the tax bill for a large share of households (all those earning above HUF 0.8 million, see Figure 4.2) but middle and upper income earners gained the most.[6] The cost of this to the government will be quite high - 2005 budget estimates put the cost at about HUF 100 billion, close to ½ a percentage point of GDP. While, again, the principle of reducing taxation is sound, the timing of such large tax cuts for middle and upper income earners is questionable.

The policy strategy on personal income tax reductions should be rethought. A better approach would be to work solely with the parameters of the PIT schedule and, given fiscal concerns, to aim for smaller reductions in total PIT revenue. *In particular, the special allowances for employees schedule could be scrapped and replaced with a universal tax allowance (i.e. effectively a zero tax rate up to a certain level of income) to replicate the effect of the current allowance scheme. A universal allowance would of course reduce taxes across all income groups, but this could be offset by smaller tax-bracket increases than those currently proposed for 2007 and beyond in the Hundred Steps programme* (see Annex 4.A1).[7]

Figure 4.2. **Distribution of taxable income**[1]



1. Only taxable income above minimum wage has been used for the calculation.

Source: OECD calculation based on tax revenue data for 2004 from the Hungarian authorities.

In addition, while there are understandable motivations (such as the low birth rate) and political sensitivities in family policy, *the authorities should reconsider the exceptionally high level of support delivered via taxes and benefits – there may be more efficient ways of reaching family policy objectives.* The strong family bias is illustrated in Table 4.1; the gap in tax wedges (note that these include cash transfers) between households with and without children in the simulations is very large in international comparison. This would suggest that there may be room for cutbacks and perhaps more efficient ways of reaching family policy objectives. The savings from such measures could, for example, be channelled into across-the-board cuts in taxation. Though there are no plans, as yet, to move along these lines, there are proposals that will improve the structure of family support through taxes and benefits in the Hundred Steps programme. It is planned to eliminate the allowances and to channel family support through benefits only, thus removing the progressivity in support implied by tax allowances (see Annex 4.A1).

More work is needed in reforms to welfare and early retirement schemes

The welfare and pension systems are also instrumental in the low employment rate. In particular opportunities to get disability benefit and early retirement pensions have been important in creating the large number of people who have withdrawn from the labour market.[8] Indeed, figures suggest the number of recipients in these schemes is at least twice the number getting unemployment benefit or basic social welfare (Table 4.2). Recognising the problems in the distribution of recipients across different welfare schemes, a process of simultaneous reform to unemployment benefit and welfare schemes is underway. The unemployment-benefit reforms broadly aim to increase job capacities and incentives to look for jobs while welfare reforms focus on activation measures. This reform process has importantly seen a continuation of efforts to contain disability benefit recipiency, steps to increase the age of retirement and efforts to contain abuse of special rules that allow the unemployed to get sickness pay.

The number of disability benefit recipients remains very high

The disability benefit scheme essentially provides a permanent pension. Indeed, the benefit has close links with the PAYG component of the pension system. For example, the benefit amount is based in part on the number of contribution years to the pension system. In addition, those who begin on disability before retirement age continue with this benefit into retirement instead of getting the standard pension.[9] The replacement rate of benefit is also roughly similar to the PAYG pension, *i.e.* between 50 and 60% of previous earnings. The benefit amount is capped, but at a relatively high level compared with unemployment benefit. In addition there is a minimum guaranteed amount that compares favourably with social security which is the only other source of long-term welfare support (Table 4.2).

The number of benefit recipients has grown massively over the past decade or so and cross-country comparisons confirm that Hungary is one of the several OECD countries with significant problems on this front (Figure 4.3). Since the early 1990s the number on disability benefit below the standard age of retirement has risen from below 250 000 to over 450 000 and is equivalent to over 10% of the working-age population. Indeed, from as young as 40 it is common for the non-employed to be recipients (Figures 4.4 and 4.5). Furthermore, there are approximately 350 000 additional people on disability benefit who are past the age of retirement and this has special implications for the old-age pension system (see Box 4.2).

As in other countries with large numbers of disability benefit recipients, the system has clearly ended up providing welfare to a much wider group than originally intended, because eligibility conditions have either been too light or too lightly enforced. One sign that disability has become a widely accepted form of welfare support is that take-up is strongly correlated with unemployment rates across regions, suggesting individuals indeed seek to get disability benefit as a means of income when out of work. The main concern from an economic perspective is that a large stock of disability benefit recipients almost certainly includes many who in fact have at least partial work capacity, but who have no pressure or encouragement to consider re-entering the labour market.

The most recent move to contain inflows has been to streamline medical guidelines for eligibility. A new set of guidelines has been completed and are being distributed to the Insurance Fund's doctors. The new guidelines are aimed as a first step towards a system that takes more account of remaining abilities and that encourages rehabilitation to the workforce. While such efforts are welcome, similar moves in other countries have not always produced the desired results. For example, Australia and the United States have put strong focus on increasing outflows through economic incentives but outflow rates remain low and similar to Germanic and Scandinavian countries that have focused more on preventing inflows into permanent disability benefit.[10] In some countries the authorities have managed to take beneficiaries off the rolls by strict re-testing of peoples disabilities, for example this was done in the Netherlands in the mid-1990s. However, such moves are often, not surprisingly, politically sensitive. In sum, *in designing rehabilitation schemes and other schemes to get more people currently on disability benefit back into jobs, the authorities should take a close look at experiences elsewhere and be cautious in introducing new measures, especially those that require additional resources. Further tightening of screening procedures for entering disability may be a more effective instrument.* In taking further steps the authorities need to bear in mind that some measures are already being implemented and implementation of new measures may have to wait until the impacts of these have been evaluated.

In recent years the Hungarian authorities have focused on containing inflows to disability benefit by altering the system of assessment. One positive aspect of the system now operating is that medical assessment is made by doctors employed by the National Health Insurance Fund Administration – not, as is the case in some other countries, by a general practitioner chosen by the benefit applicant. Inflow figures since 2001 show an encouraging decline but it is too early to tell if these are the start of a sustained trend (Figure 4.4).

Table 4.2. **Key features of commonly used benefit schemes among working-age adults**

Scheme	Key features of eligibility conditions	Maximum length of benefit	Benefit amount	Number of recipients (approximate latest available figures, '000s)[1]
Disability benefit	Medical assessment by doctors employed by the National Health Insurance association.	Indefinite	Between about 50 and 60% of previous earnings, calculated in a similar way to the PAYG pension. There is a floor equal to the minimum old-age pension. The ceiling is relatively high at about three times the average wage because ceilings on contribution payments.	460
Early retirement	Based on number contribution-years to PAYG pension and age. Those aged 55 and upwards can be eligible.	Up to 5 years before retirement	Full pension or permanently reduced pension, depending on the scheme	150
Unemployment insurance benefit	At least 200 days of insured employment over the four years prior to becoming unemployed.	9 months	65% of the previous nominal but with a relatively low ceiling of 180% of the minimum pension (*i.e.* about 44 500 per month in 2005). There is a floor of 90% of the minimum pension (*i.e.* HUF 22 230 in 2005).	100-130
Sickness pay (extension into unemployment)	Eligible as long as the person goes on sickness benefit at least three days before becoming unemployed.	3 months with possible extension to 6 months	Normally 70% of the previous average wage but notably with no ceiling.	80
Social assistance	General income support, means tested for prime-age workers. Prime-age workers refusing an offer of public work are denied benefit. Public work jobs must be held for at least 30 days.	Indefinite	Variable, capped at 70% of the minimum old-age pension, *i.e.* about HUF 17 000 per month	110-125
Memorandum items	Income and wages (HUF per month), 2005 Minimum amount of the old-age pension 24 700 Minimum wage 57 000 Average net wage (estimate) 100 000 Average gross wage (estimate) 150 000		Number of non-employed (000s):[2] 20 to 64 years 2 300 55 to 64 years 830 Registered unemployed: 350 (approximate) LFS unemployed: 250 LFS employed 3 900	

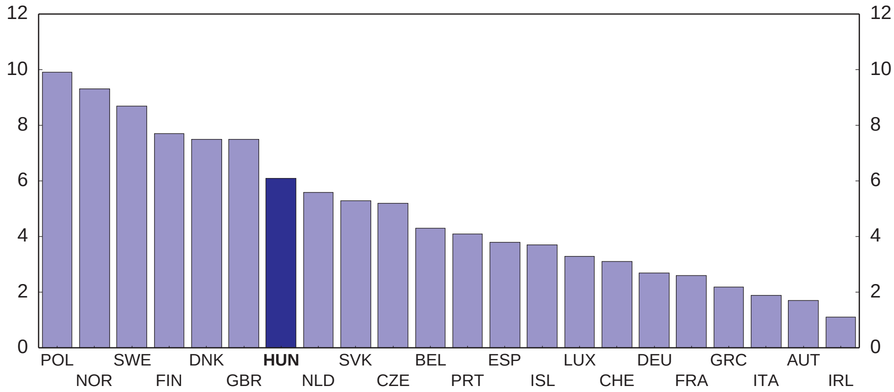
1. Disability recipients, number below retirement age, 2004 figures (Ministry of Finance).
   - Early retirement recipients includes those receiving the Advanced Retirement Pension, the Reduced Advanced Retirement Pension plus small numbers on an "employer sponsored" early retirement scheme and a special scheme for miners (Ministry of Finance).
   - The range of the number of unemployment insurance beneficiaries is based on quarterly figures between Q4 2003 and Q3 2004 (Hungarian Central Statistical Office, *Statistical Report*).
   - For sick-pay recipients the number reflects the number of recipients of earnings-related sick pay who are unemployed.

   The number of ordinary social support recipients is based on the same source as unemployment-insurance beneficiaries.
2. 2003 data (OECD).

Source: Ministry of Finance; Hungarian Central Statistical Office, *Statistical Report*; OECD.

Figure 4.3. **Inactivity because of illness or disability**[1]

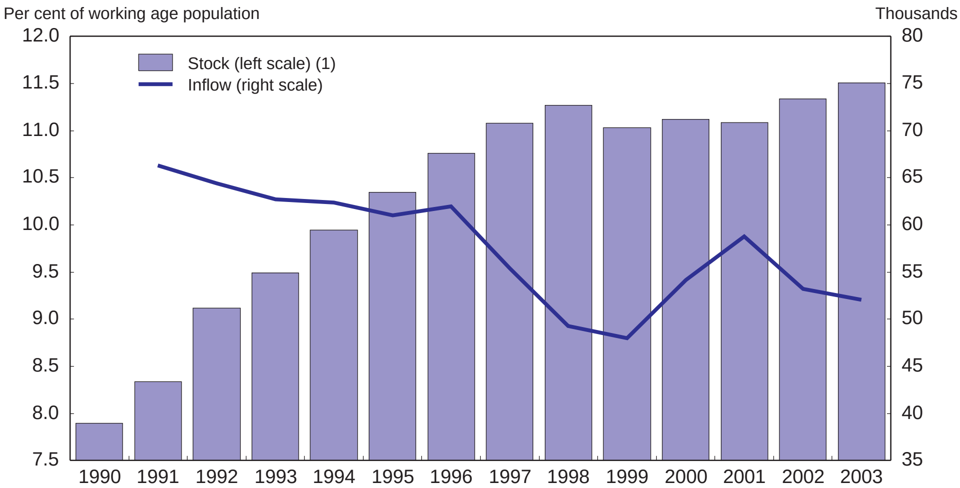
As a percentage of the working age population, 2003



1. These data are derived from responses to questions in the European Labour Force Survey. They are therefore not comparable with data on the number of beneficiaries to disability or sickness benefit. The working age population is defined as the population aged 25 to 64 years.

Source: European Labour Force Survey.

Figure 4.4. **Stocks and inflows to disability benefit**



1. The stock is that cumulated at the beginning of each year.

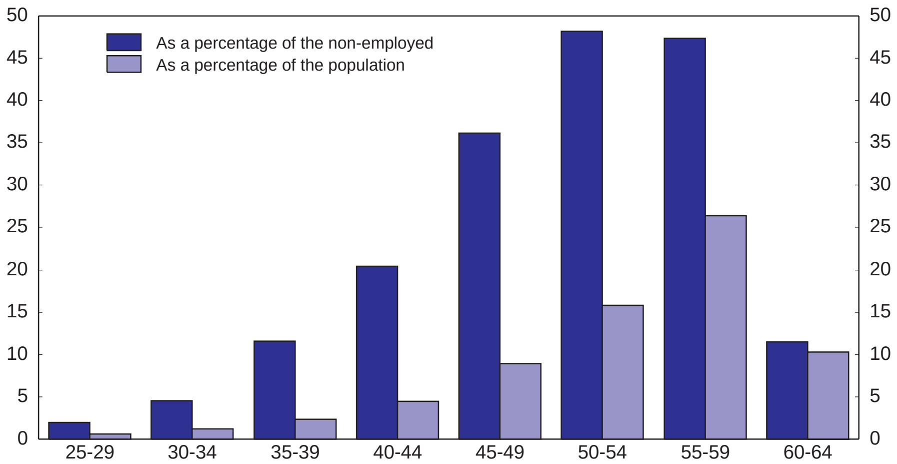
Source: Ministry of Finance and Central Statistical Office.

Sickness pay rules remain open to abuse

Though there has been welcome adjustment of sick-pay rules for those facing unemployment, the system remains open to abuse and further reform is needed. Under current rules, sickness pay is usually 70% of earnings (with no ceiling) and can be drawn for an extended period after the termination of employment.[11] There are a fairly large number of people on sickness pay after termination of contract, around 80 000 compared with no more than about 130 000 on unemployment benefit (Table 4.2), suggesting that these rules are too generous. Though, as is typical elsewhere, an employer cannot make someone redundant while they are off sick, employees can go on sick leave while serving out their notice period (possibly with the encouragement of employers). The period of extension was reduced from six to three months in 2004 and this has contributed to a fall in the number of sickness days of over 10%.[12] Nevertheless, it seems likely that this aspect of the system has remained open to abuse, not least because the uncapped benefit is much more generous than the heavily capped unemployment benefit. In addition, though the standard extension has been reduced to three months, an extra three months can be granted on a discretionary basis (using means-tests and taking account of other circumstances, such as the length of the previous contributory period), so the reduction in the extension will anyway only apply partially.

Figure 4.5. **Disability benefit recipients by age**

2003



Source: Ministry of Finance.

Further measures should be taken to cut back on abuse of sickness pay. When those on sick pay become unemployed, the payouts should be brought in line with unemployment benefit. In addition**,** granting of the discretionary 3-month prolongation of sick pay for the unemployed should be limited and further cuts to the standard extension should also be considered.

Unemployment insurance benefit: increased generosity could balance other reforms

Increased generosity in unemployment benefit could possibly be used as a positive counterweight to, for example, stricter rules on disability benefit and reduced generosity of sick pay. Unemployment-benefit can be paid up to nine months and the replacement rate is 65% of previous earnings. However, the benefit is capped at a fairly low level so that the replacement rate starts falling below 65% for those who previously earned more than about 20% above the minimum wage (implying also that the maximum possible unemployment benefit is about 80% of the minimum wage).[13]

One advantage of the current level of unemployment benefit is that there are strong incentives for all recipients to search across a wide range of work because the maximum benefit lies below the minimum wage. The downside is that this makes other sources of welfare look very attractive. *One way of retaining some of the advantage of the current benefit amount while dissuading application to other benefit schemes would be for benefit to start relatively generous but be reduced over time.* Benefits in the first few months of unemployment could be made relatively attractive, encouraging those recently made unemployed to take up unemployment benefit and become involved in the commitments and support for job search that receipt of the benefit requires. According to OECD comparisons (OECD, 2005b), the net-replacement rate from unemployment benefit is relatively low compared with other countries (Figure 4.6) and the initial benefit level, particularly through an increase in the cap, could probably be raised without reaching levels that pose serious threats to incentives for job-search. *It may also be advantageous to extend the length of unemployment benefit so as to encourage contact with the labour market.* The gains from altering the unemployment benefit in the ways suggested could also be boosted by further developing "mutual obligations" in the unemployment benefit system through increased commitments to active job-search requirements by benefit recipients combined with increased help in job placement services. Steps announced in May 2005 as part of the Hundred Steps programme suggest the authorities are already moving along the lines recommended above, notably with an increase in the cap on benefit for the first three months of unemployment (see Annex 4.A1).

Box 4.2. **Developments in old-age pension reform**

Hungary's old-age pension reform began in 1998 and involves a transition from full PAYG pensions to a two-pillar system with lower PAYG payouts augmented with pensions generated by compulsory contributions to private sector pension funds (for further details see the section on pensions in the special chapter on sustainable development in the 2004 *Survey*). The first two-pillar pensions will begin to be paid out in 2013 and are strongly linked to previous earnings (*i.e.* there is little redistribution) as even the PAYG component is to be calculated on a full accruals basis. A safety net is to be provided by a means-tested income supplement for those aged over the statutory retirement age.

The shift towards stronger links between contributions and pensions is welcome and the reform will also ease the fiscal burden of pensions in the long run. The fiscal burden is also being reduced by increases in the retirement age. There have been a number of welcome adjustments since the reform began, notably:

- The removal of minimum-return requirements on second-pillar funds and the withdrawal of government-backed minimum second-pillar pension amounts in 2002.
- The removal of tax-breaks on voluntary contributions to private-sector pensions was legislated in 2004 and will be implemented in 2006. However, there are intentions to replace the tax breaks with a new form of support for voluntary pension contributions.
- Proposals in December 2004 to allow (limited) use of pension-funds as collateral.

At the same time, however, a number of other adjustments have been made, or are in the pipeline that are less welcome, reflecting pressures for dilution of reforms and delay in the transfer to the new system.

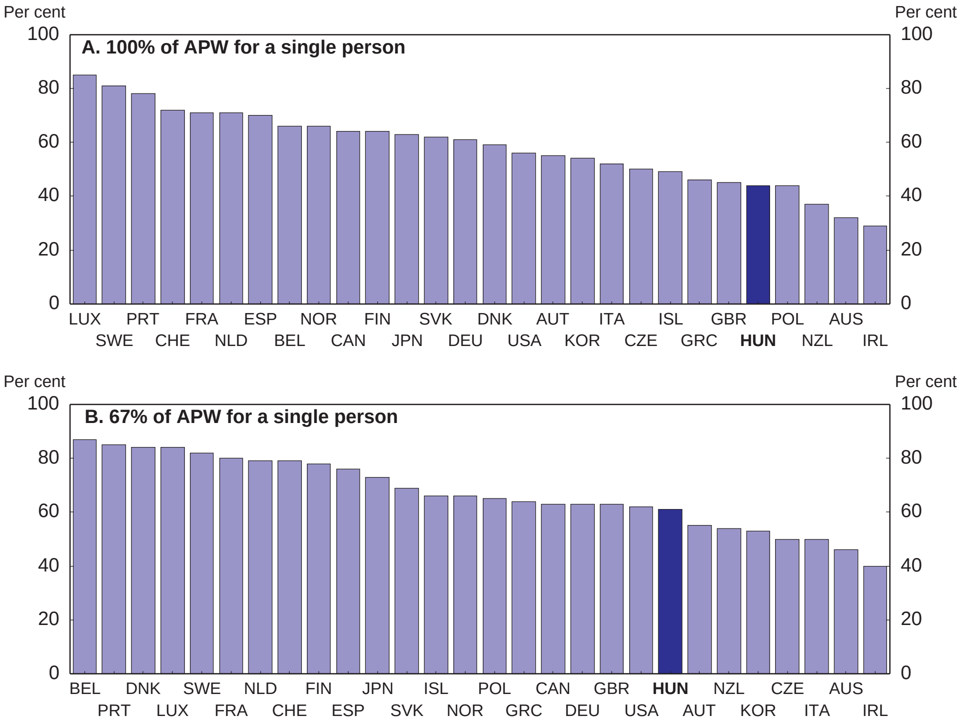
- The original pension reform envisaged the two-pillar scheme would start with a transfer to the second pillar of 6 percentage-points of the 8½ per cent employee contribution and that this transfer would be increased to 8 percentage-points by 2000. Short-run fiscal concerns however resulted in delay and the full 8 percentage-point transfer was not in place until 2004.
- Phasing in of a "13th month payment" over the period 2003 to 2006.
- In June parliament passed legislation allowing some older workers to switch from the new system to the old system. When the two pillar pension was introduced it was not envisaged that older cohorts would opt for it as typical assumptions about the rates of return from the funded pillar meant that the new pension was not a rational option. However, either through misunderstanding, or perhaps excessive optimism on the rates of return, more older people joined than expected. The new option is therefore allowing those who effectively joined the two-pillar "by mistake" to reconsider. While this measure seems reasonably justified, and the estimated number of people eligible to make this switch is low, it signals that while both the old and new systems are running in parallel, pressures to allow switches back to the old pension can arise.

The current rules for disability-pension recipients suggest another source of switching from the two-pillar pension back to full PAYG pensions. On becoming eligible for disability benefit working-age people have a choice as to whether, on reaching retirement age, they get the two-pillar pension or whether they remain on the disability pension (which pays the same as the full PAYG pension). There is a risk that if the payouts from the two-pillar system are expected to be below the full PAYG pension it could trigger people to attempt get a disability pension just before retirement. To what extent this may be a serious problem can only be speculated on at this stage but does underscore the importance of tightening eligibility for disability benefit and also suggests keeping a close eye on patterns of behaviour particularly if market returns on the funded pillar fall below peoples' expectations.

1. Individuals can only make this choice once, at the time when they become eligible for disability benefit. If the person chooses the disability pension then the accumulated second-pillar funds are transferred from the pension fund to the state.

Figure 4.6. **Net out of work replacement rates: initial phase of unemployment**[1]

2002



1. The assessment of benefit levels is based on what benefits a person is eligible for in the period after "waiting periods" for benefit are completed. It is assumed the person has fulfilled eligibility requirements regarding contributions and previous work history.

Source: OECD (2004), *Benefits and Wages*.

However, somewhat disappointing results from the relatively recent Job Search Allowance scheme suggests more work is needed to get the mutual-obligation approach to operate well in the Hungarian context. The job search allowance is a voluntary scheme and was introduced in July 2003. The scheme targets the long-term unemployed, providing a monthly job-search allowance for up to six or nine months depending on age.[14] One key aspect of the scheme is that it requires commitment to more intense co-operation with labour offices on job search. Another is that if the recipient finds work before the exhaustion of the disbursement period, half of the remaining subsidy can be paid in a lump sum. However, the results of the scheme have so far been disappointing. Although the scheme has encouraged increased job-search activity among participants, the authorities' have so far found little impact in terms of successful moves into employment.[15] *While this scheme is not working well in its present form, the international evidence is that "mutual obligations" schemes of this sort can work well and the authorities should investigate what adjustments could be made to improve the scheme's effectiveness.*[16]

The government has been a number of new active labour market measures in an effort to get more of the non-employed into work. In 2004, active labour market programmes targeting a wide range of groups vulnerable to unemployment or permanent exit from the labour market were introduced. Most notably there has been a welcome emphasis on increasing employment among the Roma. This is to be followed up by further measures; in 2004 an action plan for the period 2004-06 on promoting social inclusion for the Roma was prepared that includes a range of measures in education, training and employment.[17]

Reforms to early retirement could go further

Two aspects of the old-age pension system are also important influences on the employment rate which in combination mean that currently a lot of men retire at 60 and many women retire have retired in their late 50s.[18] First, the statutory age of retirement for the old-age pension is relatively low compared with other OECD countries (62 years for men and, currently, 60 years for women, see Box 4.2). Second, a large majority of people (estimates range between 80 and 90%) start getting pensions well before the statutory retirement age through two early retirement schemes:

- The Advanced Retirement Pension. With 38 years contribution in the PAYG pension, men can retire up two years early, and women five years early, without loss of pension. Eligibility for this scheme is very widespread, helped by the fact that some key non-work activities count as contribution years, including years spent in post-secondary education (though this feature of eligibility has been removed for younger cohorts).[19]

- The Reduced Advanced Retirement Pension. It is possible to retire with less than 38 contribution years up to five years early but with a permanently reduced pension. The permanent reductions in pension for each year of early retirement vary between 1.2 and 6% and are relatively attractive (indeed, the smaller reductions seem likely to be well below actuarily fair adjustments).[20] People can also retire *after* the standard retirement age and are compensated by an increase in pension payouts. Nevertheless, relatively few people take up the Reduced Advanced Retirement Pension, Ministry of Finance statistics show that at the end of 2004 only about 5% of early retirees were in this scheme, and it seems most people prefer to wait until they are eligible for the Advanced Retirement Pension.

However, some welcome changes are already underway or in the pipeline that will help raise employment rates, in particular:

- By 2009 women's retirement age will have reached 62 years (the same as men), as part of the final stages of scheduled retirement-age increases that were legislated in earlier reforms.

- Legislation has been passed so that in 2009 the maximum possible early retirement will be reduced to three years (for both men and women). In addition, 40 years contribution will be required for the Advanced Retirement Pension and at least 37 years for the Reduced Advanced Retirement Pension. These options will remain in place for those in the two-pillar system, though payouts will be reduced accordingly (*i.e*. as for the standard PAYG component, payouts will be 75% of that paid for the full PAYG pension).

- In addition the pension calculation has been altered to help encourage part-time work. As of January 2004, the calculation of contribution years for pension eligibility no longer includes proportional discounting of years spent earning less than the minimum wage which meant that part-time workers often failed to reach minimum thresholds for pension eligibility.[21]

Despite these changes some further reforms should be considered:

- *Phase out of the Advanced Retirement Pension.* There is a risk that, despite the increase in the contribution years for eligibility, the scheme will continue to mean most people retire at least two-years early. The scheme is anyway an overly crude way of linking contributions to benefits in the PAYG component of the pension system.

- *Maintain the Reduced Advanced Retirement Pension but reformulate the pension adjustments*. The present adjustments should be checked as they are rather low compared with typical actuarial adjustments seen in other countries. It may also pay to make the pension reductions (and increases) larger than those implied by actuarial calculations because individuals' discount rates in the run up to retirement can be relatively high.

Tackling low labour mobility

As Chapter 1 points out, regional differences in unemployment and employment rates are large and reflect geographic aspects of Hungary's process of economic growth. Market forces of course should naturally soften these disparities over time: rising business costs in high-growth regions make other regions more attractive and better employment and wage opportunities in high-growth regions encourage labour mobility. Nevertheless, policy also plays a role. Transport infrastructure affects business location decisions and commuting distances. In addition, policy on wages as well as social transfers and housing policy influence real income differences across regions and the cost of moving.

In terms of transport infrastructure there is considerable policy attention to motorway construction (see Chapter 2) but there has been rather weak progress in the development of financially sound and sustainable urban transport systems. A recent OECD report on Hungary's urban transport networks (OECD, 2004d) praises the focus being put on urban transport issues by the central government. Steps include the formation of a special transport unit within the Ministry of Economy and Transport as well as formulation of plans for a sustainable urban transport infrastructure. However, the report also says that reforms are too slow. Most importantly, mismatch between responsibilities for urban transport and resource generation capacity hampers initiative at the local level. In addition, there is over-reliance on state-owned operators in a number of cities, a lack of consistency in financing of operators and poor transparency and co-ordinations in fares. Illustrating some of these difficulties is the fact that a co-ordinated fare and ticketing system between local transport (bus, tram and metro systems) and regional transport (bus and railway) has not yet been introduced in Budapest. The inadequate institutional framework has led in some cases to a vacuum in the organisation of public transport with roles and responsibilities being unclear. In some cities, the municipal authority – weakened by lack of resources – has more-or-less relinquished organisational power over public transport operations to the public transport operator, who is thereby functioning as both the *de facto* authority and operator. This has led to inefficiencies and lack of impetus for reform. *In sum, it is questionable whether sufficient progress can be made within the current structure of urban transport policy and the authorities should consider alternative structures that improve co-ordination between responsibility, administration and financing.*

One special issue in Hungary is that labour mobility is damped by high levels of home ownership – around 90% of the housing stock is owner-occupied in most regions of the country.[22] At the beginning of economic transition much of the housing stock was sold by municipalities to the then occupants. While this has worked out well for homeowners in central and western Hungary, price (and therefore housing wealth) increases in other regions have been much lower. As a result, home-owners in depressed regions often cannot afford to get on the housing ladder in the more prosperous parts of the country. Furthermore, the high level of home ownership has resulted in a rather small rental market and this narrows the options to, for example, sell-up and move into rental accommodation elsewhere. In this regard the government's reduction of generous housing-loan subsidies has been welcome as these were fuelling regional house-price differences. *Nevertheless, the authorities should explore whether there are impediments to the development of rental low-cost housing markets in high growth regions.*

Elsewhere in the OECD, means-tested support for rental accommodation often acts as a mechanism for evening out regional differences in the purchasing power of low incomes because the support is based on local prices. Hungary's high home-ownership means that this mechanism is weak. *Easing regional cost* *of living differences across regions through the creation of regional differences in, for example, welfare payments appears limited by concerns that such measures would be difficult to administer*. The Hungarian authorities argue that creating regional differences in welfare payouts, such as disability or unemployment benefit to reflect local price differences would be difficult to manage in the current system of welfare administration and that it would be difficult to prevent abuse (for example through the registration of place-of-residence in areas where welfare payouts are higher). Some such moves would also apparently encounter constitutional problems.

Notes

1. For other assessments of labour market issues see in particular Ferenczi (2001), Horst (2004) and Scharle (2003).

2. For more detailed international comparisons of tax wedges see OECD (2004a).

3. Employment data show encouraging signs that the removal of the employers' fixed healthcare contribution in 2004 is encouraging the development of part-time employment; in the first quarter of 2005 part-time employment was 4.8% higher that in the first quarter of 2004. However, there are concerns that some employers have switched to officially employing people on a part-time basis while in fact continuing to employ them on a full time basis and are topping up wages with unrecorded payments.

4. The targeting cuts in employers contributions are in the form of refunds paid following application by employers. The total cost to the government budget in 2005 of this scheme is estimated to be HUF 9 billion and is expected to result in about 80 000 subsidies. Further details on the refunds for young people and those returning from parental leave are as follows:

   - Young people. For the first year of employment, employers are refunded so that they pay 15% social security on earnings up to 150% of the minimum wage for those under 25 and 200% of the minimum wage for those under 30 with tertiary education. There are also refunds for the second year of employment but they only reduce the employer's contribution to 25%.

   - Those returning from parental leave. Employers pay half the standard social security for those returning after nine months parental leave. The refund only applies to earnings up to HUF 90 000 per month. In addition to those returning from parental leave, those returning to work after having cared for other family members (such as elderly parents) are also covered by the scheme.

5. The schedules for the two allowances that reduce earned-income tax for lower income households are as follows, (figures are annual):

   - First allowance: 18% of the gross wage up to HUF 1.35 million but with a cap on the allowance of HUF 108 000. The allowance is phased out between gross wages of HUF 1.35 and 1.94 million.

   - Second allowance: 18% of the gross wage up to HUF 1 million but with a cap on the allowance of HUF 15 120. The allowance is phased out between gross wages of HUF 1 million and HUF 1.35 million.

6. In 2004 there were three personal income tax rates at 18, 26 and 38%. The 26% rate was paid on taxable earnings over HUF 0.8 million and the 38% rate on earnings over HUF 1.5. In 2005 the 26% rate was eliminated and all earnings up to HUF 1.5 million were taxed at 18%. Therefore all households with all those earning more than HUF 0.8 million are set to gain something from this change. However, all those with taxable earnings above HUF 1.5 million get the maximum cash benefit from the change in rates.

7. There are inevitably further complications to such proposals. In particular, the introduction of a universal allowance would also apply to the self-employed, thus further increasing the fiscal costs of such a move.

8. For a recent overview of benefits available to the non-employed across OECD countries see OECD (2004b).

9. Disability benefit is calculated along the same principles as old-age pensions, *i.e.* it is linked to previous earnings regressively bounded by a floor and ceiling to the benefit amount. In detail:

- All earnings on which pension contributions were paid are taken into account in the calculation of average earnings for computing the pension (the “pension base”). In the pension base earnings are reduced by a computation of income tax paid, while past earnings are increased to the earnings level of two years prior to retirement.

- The level of benefit depends on the age of retirement, the level of disability and the number of pension-contribution years, and varies between 51 and 63% the pension base. The share of earnings counted as the pension base falls with increasing levels of earnings (this feature is being gradually phased out). The benefit levels are typically similar to those under the PAYG pension, though notably they are higher for young disabled people. For example, someone getting disabled between 35 and 39 years of age, with 15 years of service, within severe disability is entitled to 58% of the pension base. The minimum number of contribution years for eligibility to the pension varies across age groups between 2 (before 22 years of age) and 20 (after 55).

- There is an indirect ceiling on the disability pension because of a ceiling on the contribution payment (currently the ceiling is about three times the average wage).

- Disability benefit has a minimum amount which equals to the old-age pension minimum in case of disability (for the typically level of disability the amount is HUF 24 700). The disability benefit is not subject to income tax.

10. This cross-country assessment is based on an OECD review of disability and sickness pay (OECD, 2003). Note that the review, however, does not cover Hungary. Assessments can also be found in OECD *Economic Surveys*. See in particular the latest *Surveys* of the Swedish system (OECD, 2005a) and the Netherlands (OECD, 2004c).

11. Sickness pay is normally 70% of average earnings in the past calendar year (large one-off payments such as severance payment, redemption of paid holiday, etc. are not liable to employee's health contribution and are therefore not counted). Sickness pay is 60% if the recipient is in inpatient hospital care or if the person has made less than two years contributions prior to becoming ill. The person’s sickness benefit does not even have to begin when they are employed, as the rule is extended into the first three days of unemployment.

12. The number of days sickness pay in 2004 was 87% of that in 2003, while the number of cases was 93% of the 2003 figure. The Hungarian authorities think that the fall in number is not only due to the new rules on sick pay for those facing unemployment but also because of previous tightening of access through new guidelines and stricter monitoring for all applications for sickness pay.

13. The cap on unemployment benefit is 1.8 times the minimum pension (*i.e.* about HUF 44 500 per month in 2005). This implies the maximum benefit is reached with earnings of about HUF 68 500 per month - the minimum wage in 2005 is HUF 57 000. There is also a floor to unemployment benefit set at the level of the minimum pension (HUF 24 700 in 2005). The floor for most prospective unemployed is irrelevant because even at the minimum wage, the unemployment benefit is higher (at the 2005 minimum wage of HUF 57 000, unemployment benefit is about HUF 37 000). A recent analysis of the unemployment benefit system can be found in Institute of Economics (2002).

14. For eligibility, individuals must have been on unemployment insurance benefit for at least 180 days and must be willing to engage in intensive co-operation with labour centres. The allowance is 85% of the minimum old-age pension in 2003, a sum of HUF 18 530. The maximum duration is 6 months (9 months for those aged over 45).

15. The difficulties in the job-search allowance scheme cited by the Hungarian authorities include:

- Problems in getting beneficiaries to understand the additional commitment to job-search.

- Problems in communicating to employers that those on this scheme need certification to show that they had been seeking work.

- Evidence that that some beneficiaries were treating the job-search activity as a formality to get benefit rather than any serious attempt to get work.

- Evidence that, in the early phase of the benefit (particularly the first month), the scheme did not prompt additional job search.

16. A recent OECD overview of welfare policy can be found in the publication produced for the 2005 labour and social affairs Ministerial meeting (OECD, 2005c).

17. For an overview of labour market programmes for the Roma see ILO (2003). There has also been a shift towards more openness on the issues the education system faces regarding Roma children, in particular the channelling of Roma children into "special schools" or into separate classes within mainstream schools. Policy measures to encourage a shift away from segregation to integration have included extra financial assistance to schools that want to run an integration programme.

18. Another early retirement scheme, which involves employers "sponsoring" early retirement was prevalent in the 1990s during restructuring but less than 4 500 people are now in this scheme and it is therefore relatively unimportant.

19. Only those who have spent years in post-secondary education before 1998 can now have this time counted towards eligibility. This could affect some pension payouts in the near term (*e.g.* for mature-age students) but the main impact will not come through for a couple of decades or so (as many relatively young people have already spent years in post-secondary education before 1998).

20. The pension reductions are calculated as a percentage of the number of months of early retirement. The percentage depends on how far short the person is from the full 38 service years needed for a full pension. At 37 service years the pension is cut by 0.1% per month of early retirement. For 36, 35, 34 and 33 years the cuts are 0.2, 0.3, 0.4 and 0.5 respectively. This means that for each year of early retirement, pensions are cut by between 1.2 and 6%. Someone who works beyond retirement age has their pension increased by 0.5% for each additional month spent in employment (*i.e.* 6% per year).

21. For example, according to the previous rules someone who worked part-time for 20 years for half the minimum wage, earned only 10 service years and this meant they would not be entitled any pension because at least 15 service years are required. As from 2004 however, the 20 years of part-time work count as 20 service years for the purpose of entitlement while the amount of the benefit is calculated on the basis of 10 service years.

22. Data from the Central Statistical Offices' *Regional Statistical Yearbook*, 2004 shows that in 2003 88% of dwellings were occupied by owners. For a recent assessment of mobility issues in the Hungarian labour market see Institute of Economics (2004).

BIBLIOGRAPHY

Ferenczi, B. (2001), "Labour Market Developments in Hungary from a Central Bank Perspective: Stylized Facts", Magyar Nemzeti Bank, *Working Paper*, No. 5, 1999.

Horst, F. (2004), "How Flexible are Labour Markets in the EU Accession Countries Poland, Hungary and the Czech Republic?", *Comparative Economic Studies*, Vol. 46, Issue 2.

ILO (2003), *Labour Market Programmes for the Roma in Hungary*, International Labour Organisation.

Institute of Economics (2002), *The Hungarian Labour Market* 2002, Institute of Economics, HAS, Budapest.

Institute of Economics (2004), *The Hungarian Labour Market* 2004, Institute of Economics, HAS, Budapest.

OECD (2003), *Transforming Disability into Ability*, OECD, Paris.

OECD (2004a), *Taxing Wages*, OECD, Paris.

OECD (2004b), *Benefits and Wages*, OECD, Paris.

OECD (2004c), *OECD Economic Surveys: Netherlands,* Vol. 2004/9, OECD, Paris.

OECD (2004d), *Implementing Sustainable Urban Travel Policy, National Peer in Hungary*, OECD, Paris.

OECD (2005a), *OECD Economic Surveys: Sweden*, OECD, Paris (forthcoming).

OECD (2005b), *Society at a Glance*, OECD, Paris.

OECD (2005c), *Extending Opportunities: How Social Policy can Benefit Us All*, OECD, Paris.

Scharle, A. (2003), "Competitiveness and the Labour Market", Ministry of Finance, *Working Paper*, No. 4, Budapest.

ANNEX 4.A1. MEASURES PROPOSED IN THE HUNDRED STEPS PROGRAMME ON TAXATION, FAMILY SUPPORT AND EMPLOYMENT

As described in Chapter 1 in April 2005 the government began to announce a large number of structural reform measures – collectively called the Hundred Steps programme. This annex outlines the measures proposed in taxation, family support and employment, based on available information provided by the Ministry of Finance in mid-June 2005.

Taxation

Value-added tax (VAT)

1. January 2006: The top rate will be reduced from 25 % to 20%.

2. Personal-income tax (PIT)

3. January 2006. The top rate will be reduced from 38% to 36%. In addition, the threshold between the 18 % rate and the 36% rate will be raised to HUF 1.55 million (the threshold is currently HUF 1.5 million per year).

4. In 2007 the 18 % threshold will be increased to HUF 1.7 million.

5. In 2008 the 18 % threshold will be increased to HUF 1.9 million.

6. In 2009 the 18 % threshold will be increased to HUF 2.3 million.

7. In 2010 the 18 % threshold will be increased to HUF 3.0 million.

Corporate tax.

8. In 2006 a refund will be available that reduces corporate tax to 10% for the first HUF 5 million of the corporate tax base. The base above HUF 5 million will continue to be taxed at 16%.

9. Local business tax.

10. From 2006 the 100% of local business tax can be deducted from sales revenues.

11. From 2008 the local business tax will be eliminated.

12. Social security contributions.

13. From November 2006 the lump-sum health care contribution will be eliminated.

14. In 2007 the social security contribution paid by employers will be reduced from 29% to 26%.

15. In 2009 the social security contribution paid by employers will be reduced from 26% to 24%.

Luxury tax

16. In 2006, a luxury tax will be imposed on real estate with a value of more than HUF 100 million, but only on the value that is over HUF 100 million. The tax will be an annual 0.5%.

Family Support

1. Increased family benefits (HUF 11 000 for one child, HUF 12 000 per child for two children, and HUF 14 000 per child for three or more children).

2. Additional benefit for single parents (HUF 1 000 per child).

3. Elimination of tax allowances for those with one or two children.

4. For families with three or more children a reduced tax allowance (HUF 4 000 per child) will be maintained up to a gross household monthly income of HUF 280 000.

5. Regular child protection benefit will be incorporated into standard family benefit. This means that access to child protection benefit will no longer require separate application to municipalities.

6. A separate child subsidy fund of HUF 20 billion is to be set up to provide addition support for low income households.

7. Parents will also be permitted to take full time jobs during while receiving the "GyES" childcare subsidy. After children are over 1 year parents will be allowed to work full time and still benefit from this childcare subsidy.

8. The GyES childcare subsidy will be tax exempt even the beneficiary disposes income from work.

Employment

1. Instead of unemployment benefit there will be a "job search benefit" and a "job search allowance":

2. For the job search benefit there is an initial period of benefit (up to 91 days) based on 60% of the previous wage (capped at HUF 68 400, 120% of the minimum wage). The next period's benefit (up to 179 days) becomes a fixed amount of HUF 34 200 (60% of the minimum wage).

3. The job search allowance is designed for those who have no rights to the job search benefit, or who have used up it, or who are coming up to retirement age. The allowance can be granted for up to three months period (six months for people over 50) and will be 40% of the

minimum wage (in 2005 it's HUF 22 800). During this allowance the job-seeker can work with book of temporary workers.

4. Introduction of so-called "blue job" treatment of various forms of temporary work – such as, cleaning, babysitting and servicing-repairing.[1] "Blue job" treatment means that employers can pay the social security contribution through a common charge ticket.

5. The maximum number of seasonal workdays in agriculture in blue-job system will be raised to 60 days.

6. Stricter inspection of employers and undeclared work.

7. Special regulation in order to "whiten" employment in construction industry, tourism and catering.

8. Creation of criminal liability for employers who employ workers illegally.

9. Only companies that have a clean track record in administering employment contracts and social security contributions will be able to take part in public procurement tenders, or receive state subsidies.

10. A guarantee that employers will not be able to pay low wages while setting up unrealistic requirements for the employees.

11. Modification of the regulation of labour force hiring to prevent employers evading payment of social security contributions.

12. Elimination of disincentives to work for those on unemployment, childcare, or social benefits.

13. Sources for public work will be more aimed towards the most disadvantaged.

14. Closer co-operation between the employment and social services with a view to encouraging people on benefits to search for a job.

15. The "premium years program" (aimed at encouraging those intending to take up early retirement schemes to remain in part-time employment and introduced in the public sector in 2004) will be extended to private sector, too.

16. Revision of the subsidies for sheltered employment of disabled people.

17. Revision of the adult education support system. Only those institutions can get subsidies which can prove that their participants, with the new skills acquired, are able to find a job.

Notes

1. Named after the blue colour of the book of temporary workers.

5. POLICIES TO PROMOTE INNOVATION

The Hungarian government has recently been focusing on innovation policy as part of a wider campaign to improve the business environment. This Chapter first underscores the importance of a good general business climate in encouraging both formal and informal R&D activity as well as ensuring Hungary benefits from the international diffusion of innovation. In examining specific innovation policies, the new National Innovation System is described and an assessment is made of the National Innovation Fund and the Innovation Contribution used to fund it. Assessment of changes in R&D tax allowances and in the strategy for giving out grants for research is also made. The chapter also looks at regulatory reform to improve industry-science links, including the government's recent legislative changes that make it easier for universities to set up spin off companies. The final section considers what further reforms are needed to help tertiary and compulsory education become more conducive to innovation and to encourage the deepening of human capital in general.

The current government is paying considerable attention to innovation with senior politicians strongly involved in reforms through a new structure of policymaking groups, advisory committees and executive bodies (referred to as the National Innovation System).[1] The relatively low level, and apparently weak progress, of innovative activity (see Chapter 1) certainly appears to give grounds for the focus on innovation; a focus which is also encouraged by commitments to increase R&D activity in the EU's Lisbon Agenda and by opportunities to get EU funds to support R&D-based projects.[2] However, policymakers in Hungary face the same fundamental problems in developing innovation policy as elsewhere: it is difficult to establish just how far to go in encouraging innovation. Some level of legal, institutional and financial support is universally accepted because research generates positive spillovers. However, research activities take diverse forms, spillovers effects are hard to gauge, and policy instruments have uncertain impacts and interact in complex ways. As Chapter 1 points out, cross-country comparisons in R&D activity help somewhat but can also be misleading because differences are driven by market forces and differences in the structure of production as well as policies. Furthermore, policies in other countries are not themselves necessarily optimal. In addition, policies affecting the overall business environment influence R&D and therefore a good balance between targeted and general measures is also important. Given all these complexities, good innovation policy needs to be a careful process of advance through judicious adjustment and careful monitoring.

This chapter first underlines the importance of good framework conditions for innovation policy. This is followed by a description of the new administrative structure for innovation policy and assessment of the key measures in financial and administrative support for R&D activity. The final section looks at whether the education system is properly geared up to provide skills conducive to innovation and able to respond quickly enough to changing market demands. The policy recommendations are summarised in Box 5.1.

Good general business conditions are important for innovation

Healthy business conditions are the precondition for innovation in Hungary to take off and this should be a key consideration in overall thinking on innovation policy. General business conditions matter for innovation, partly because they can help increase the impact of innovation policy itself but also because they can have direct influence on R&D activity and affect broader and less formalised forms of innovation. The latter is arguably important for Hungary as its large small-and-medium enterprise sector means the creation of new products and processes on an informal basis (e.g. research conducted without use of identifiable specialist researchers or research departments) is an important aspect of innovation in a broad sense.

The framework conditions for business also matter for Hungary's important inflows of "imported" innovation. As a small open economy, the fruits of innovation have in large part been – and will continue to be – imported in the form of high-tech capital equipment, production processes and foreign business models. This is underscored in OECD indicators of science and technology which show Hungary's share of high-technology in manufacturing exports to be one of the highest in the OECD area (Figure 5.1). Therefore, although it is important that domestic R&D develops more rapidly, it is also important that the embodied know-how in imported capital equipment and foreign business techniques continue to pull Hungary up the value-added chain.

Macroeconomic conditions are an important influence on domestic R&D activity. This has been underscored in recent OECD analysis (OECD, 2005a) examining what drives differences in the growth of R&D activity across countries; robust output growth, stable inflation and low real interest rates are all found to be important drivers of innovation. In many ways this is not surprising; when economies are doing well, businesses can more easily afford research into new products and processes and buoyant demand for consumer and investment products makes for more favourable assessment of the risks and returns of engaging in research. *This underscores the need for sound macroeconomic policy*, as discussed in Chapter 2.

Box 5.1. **Policy recommendations on innovation policy**

General business conditions and innovation

Healthy framework conditions for business are the precondition for innovation in Hungary to take off and for fast absorption of innovation from outside the country.

- Generating healthy framework conditions underscores the need for sound macroeconomic policy.
- In terms of general-purpose technologies, ICT diffusion has been hampered at least in the past by a rather slow liberalisation of telephony markets which has reduced pressures for price cuts in internet access charges and other communication services. Market players, particularly the incumbent, Matav, need to be closely monitored.

Specific innovation policies

The government's focus on innovation policy has involved changing the decisionmaking and administrative structure of innovation policy and increasing the level of support provided. There is now a need to take stock of the impact of recent measures, bearing in mind the following:

- Assessment of the Innovation Fund system should focus on whether the opportunity for businesses to reduce their innovation contribution levy by increasing R&D activity has successfully widened private-sector innovation. Even if firms' R&D responses to the offset option turn out to be good, the authorities should nevertheless assess whether such strong earmarking of revenues is optimal.
- The strategy of increased targeting in grant allocations implies that it is important the authorities follow up on plans to create a monitoring system of projects supported by grants. This could perhaps usefully be extended to include broader monitoring of the targeted research fields. The authorities should also consider the potential for spillover effects to other sectors in deciding on which areas to target.
- Given that the current tax-allowances are relatively generous in international comparison, and that the conclusions of research on the impact of tax relief are often sceptical, the allowances may be too high and deadweight losses substantial. Bearing this in mind, the authorities' should focus on evaluating the impact of the current level of support before deciding on further changes.
- The lightening of rules on university spin-off companies and the secondment of researchers to the private sector are welcome, but more regulatory reform needs to be done, particularly regarding the Hungarian Academy of Science (HAS). One way of helping HAS reform would be to strengthen the link between performance and budget allocation. Reforms may also require changes to the tenure status of HAS's researchers.

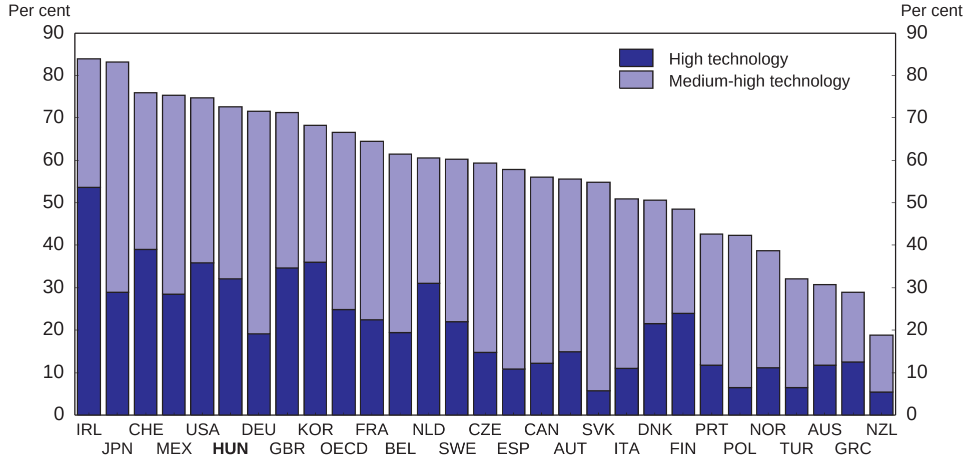
Education policy and innovation

The introduction of shorter more vocational degrees in tertiary education is particularly welcome, nevertheless more work needs to be done on market signals in tertiary education and in raising standards of compulsory education:

- The government should try again to introduce greater consultation between the tertiary sector and business on the content and mix of courses. In addition the government should consider making greater use of incentives in tertiary-education funding to encourage changes in the allocation of teaching resources. The incentive structures for students and universities could also be strengthened if tuition fees extended throughout the system, however there is no political intention to introduce such a general tuition fee system.
- Stronger supply responses are also needed in vocational education; practical training as well as consultation and cooperation with the business sector should be strengthened.
- In compulsory education, the authorities should take stock of the current system of segregating secondary-school students into vocational and academic streams system, given its tendency to misallocate students and that the division into vocational and academic streams is anyway less useful in the context of providing skills for modern labour markets. The challenges faced by the teaching profession need better alignment of teacher education, reward structures, professional development and school needs. In particular, excessive job protection needs to be addressed and pay structures are in need of reform.

Figure 5.1. **Share of high- and medium-high-technology in manufacturing exports**

2003[1]



1. Total OECD excludes Luxembourg.

Source: OECD, STAN Indicators databases, March 2005.

In addition, the various regulatory frameworks for business as well as general tax and support measures aimed at encouraging business activity contribute to encouraging R&D-based enterprises. Measures to support investment are grouped under the Smart Hungary programme, including notably opportunities for tax holidays for large investments (see Annex 5.A2) and there is wide-ranging general support for SMEs, notably including simplified tax treatment (see Annex 5.A3).

The pace of diffusion in ICT among businesses and households is also a relevant framework factor for innovation (and indeed for moving up the value-added chain in general) because of the gains in business efficiency offered by ICT networks as well as the potential for innovative services via the internet. Hungary has some way to go before catching up with the levels of ICT diffusion seen in leading OECD countries and so ensuring fast progress on this front is important.[3] A widening of tax breaks on spending on computer equipment to all households is likely to help boost diffusion.[4] However, as the special chapter on competition issues in the previous *Survey* points out, *ICT diffusion has been hampered at least in the past by a rather slow liberalisation of telephony markets which has reduced pressures for price cuts in internet access charges and other communication services.* Indeed, the latest available OECD international comparisons (OECD, 2005b) suggest that, at least in mid-2004, the cost of a business-based basket of fixed-line and mobile telephone calls was still relatively high (Figure 5.2).[5] However, because a major step to further strengthen competition was taken just last year (the 2004 Telecommunication Act, see the previous *Economic Survey* for further details) it is as yet rather early to tell if more measures need to be taken. Nevertheless, it is clear from the price data that the *market players, particularly the incumbent, Matav, need to be closely monitored.*

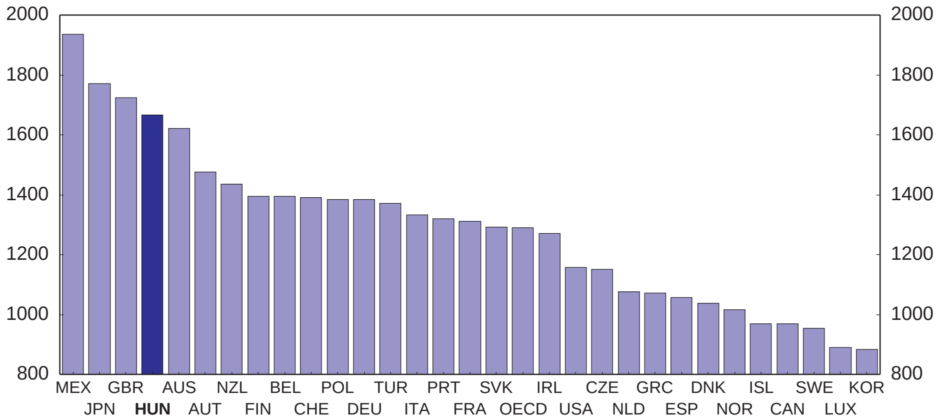
Specific innovation polices: time to take stock of recent measures

The decision-making and administrative framework for innovation policy has changed significantly over the past couple of years.[6] The new National Innovation System is headed up at the political level by the Science and Technology Board which is chaired by the Prime Minister. There is also a new executive body, the National Office for Research and Technology (NKTH), which is notably responsible for running a new fund for financing support for innovation – the Research and Technology Innovation Fund (see Annex 5.A1 for further details on the structure of the National

Innovation System). The most welcome aspect of the new framework for innovation policy is that it focuses on encouraging commercially sustainable innovation. The system also looks set to increase co-ordination across government and bring an across-the-board perspective to R&D policy.

Figure 5.2. **Telephone charges for business, excluding tax[1]**

August 2004, USD



1. Calculations are based on a basket of telephone charges that includes those for mobile and international calls as well as domestic fixed-line communication.

Source: OECD (2005), *Communications Outlook*.

In addition to the new system for funding R&D support, there have been changes in the focus of grant-based support, changes to tax-breaks for R&D and regulatory reforms. The various committees and advisory groups involved in innovation policy are also playing a role in the reform of the tertiary education sector. The key targeted measures are summarised in Box 5.2.

The Innovation Fund: a novel method of financing R&D grants

The Innovation Fund, which began operating in 2004, is a novel way of funding grants for R&D projects and other innovation programmes. Financing of the Fund comprises a new turnover-based levy on businesses (the Innovation Contribution) plus a matching transfer from central government (R&D grants were previously financed entirely from central-government funds). Firms with between 10 and 50 employees were previously required to pay Innovation Contributions but as of this year only firms with more than 50 employees are required to do so (Table 5.1). The contribution is scheduled to increase to reach 0.3% of firm turnover in 2006. In 2005, the Innovation Contribution in combination with the matching grant is expected to total HUF 40 billion (about 0.2% of GDP, see Table 5.2).

Box 5.2 **Key schemes in Hungary's innovation policy**

Grants available to both the public and private sector:

A system of open-tender grants for specific research projects funded by the innovation fund (around 30 projects are currently being funded).[1]

R&D related (co-financed) grants from the EU, including special measures for providing innovation services in industrial parks.[2]

Tax (and similar) incentives

Firms can make the following deductions from corporate income tax base:[3]

- 100% of the value of other R&D spending for outsourced R&D projects and in-house R&D (introduced in 2001, prior to this the tax allowance was 20% and was first introduced in 1997).
- 300% of the value of R&D if it is performed in a higher-education institution or in an institution managed by the Hungarian Academy of Sciences (up to a limit of HUF 50 million) (introduced in 2004).
- 50 to 70% of the value of donations to foundations supporting R&D activities.
- 10% of wage costs related to R&D or software activities (in this case the deduction is on corporate income tax, not its base).

Offset for contributions to the Innovation Fund can be made by the amount spent on R&D.

Special policies for SMEs (firms with less than 250 employees)

Assistance with intellectual property rights (IPRs) and marketing:

- The cost of applying for IPRs (up to HUF 30 million) can be deducted from the income-tax base.
- In December 2004 grants valued at HUF 80 million were awarded for tenders to provide services to SMEs to help international registration of patents and marketing.
- Support services for patenting: In 2004, a programme ("VIVACE") was launched that aims for the Hungarian Patent Office to have a new customer service network and to provide training in industrial and intellectual property rights.

Support to overcome liquidity problems in financing research in early stages of innovation:

- Financial support, funded by the Hungarian Development Bank.
- Subsidies for firms getting EU R&D grants to help overcome the problem that the EU funds are only awarded when research projects are completed (part of the 2005 Innovation Act).

Special policies for public-sector institutions and universities

As part of re-focusing of the grant system, universities have been able to apply for grants to set up regional "innovation centres".

New rules on university spin-off companies (part of the 2005 Innovation Act):

- Universities (and similar institutions) can now set up a spin-off company without government approval and a rule that the spin-off had to have at least 50% public ownership has been scrapped. Rules on academics taking leave without pay to work elsewhere have also been lightened.
- New opportunities for grants for setting up a spin-off (one of the conditions being that the spin off is classified as an SME, *i.e.* it has less than 250 employees).

Some reforms to tertiary education are underway, notably with the introduction this year of shorter and more vocationally oriented degree courses.

1. Details of the projects supported by the open tender grant system can be found on the NKTH's website.

2. Firms or universities which have succeeded in getting a grant of more than HUF 50 million of EU Structural Funds to provide innovation services to companies in industrial parks can get a subsidy equal to 50% of costs up to a value of HUF 100 million.

3. Only the most important tax-incentives for R&D are listed. The deductions are "additional" deductions in the sense that R&D expenditures are counted as a business cost anyway and like other costs can go towards reducing the profit assessed for corporate income tax. The treatment of donations is in fact more complex but effectively means an additional tax deduction of 50% (70% if the donations are classified as "permanent").

Table 5.1. **Firm contribution rates to the Innovation Fund: percentages of firm turnover**

	2004	2005	2006 and beyond
Self-employed and firms with less than 10 employees	Exempt	Exempt	Exempt
Firms with less than 50 employees	0.05	Exempt	Exempt
Firms with more than 50 employees	0.20	0.25	0.3

Source: National Office for Research and Technology.

Table 5.2. **The major items of financial support for R&D**

Type of financial support	Annual amount in HUF	Amount as an approximate percentage of GDP
Funding for grants through the Innovation Fund (Innovation Contributions plus matching transfer from central government)	HUF 40 billion (expected in 2005)	0.2 , expected to increase in 2006 and 2007 because of rising Innovation Contribution rates
R&D tax allowances	HUF 5 billion (2003 figure)	0.05
Funding for grants and other R&D-related support from EU – when co-funding is required it is generally be financed with money from the central budget line earmarked for EU integration.	About € 250 million is expected per year in the 2007-13 EU budget	0.25

Source: National Office for Research and Technology, Ministry of Finance.

A key feature of the system is that firms can deduct the value of R&D spending from their contribution. This feature aims to induce additional R&D activities. This opportunity to offset contributions may indeed have a wider take up than tax allowances (see below) as firms can benefit even when no profits are made. The mechanism also avoids the problem that tax allowances tend to favour incumbent firms through provisions allowing losses to be carried forward. In addition the Innovation Fund strongly earmarks revenues for R&D support and, because of its visibility, may raise awareness on innovation to businesses and the public at large.

However, there are some downsides to this new system. The Innovation Contribution adds to an already complex tax environment for businesses and entails some additional administrative costs for the public sector.[7] Furthermore, as with all earmarking between revenues and spending, the system reduces flexibility in public financing. This suggests close monitoring of the impact of the scheme is needed to gauge whether the downsides are serious and whether the positive impacts are significant:

- *Assessment of the Innovation Fund system should focus on whether the opportunity for businesses to reduce their innovation contribution levy by increasing R&D activity has successfully widened private-sector innovation.* In evaluating the impact of the offset option it will be important to assess how much of any reported increase in R&D activity is through creative accounting as opposed to genuine increases in resources spent on R&D.

- *Even if firms' R&D responses to the offset option turn out to be good, the authorities should nevertheless assess whether such strong earmarking of revenues is optimal.*

In addition to the Innovation Fund, resources to support R&D are available from EU-funds. Most innovation-related funding will come through the Economic Competitiveness Development

Operational Programme (ECOP).[8] As in other areas, success in tapping into the EU funds for R&D depends crucially on having good administrative support. Although the authorities have been working hard on this front, it is too early to tell the degree of success in accessing R&D-related funds (see the Annex to Chapter 2 for further detail on EU funding).

Assessing the shift to more targeting in grant programmes

Changes to the system of grants for R&D projects and other areas of innovation have entailed stronger targeting on specific areas of research and greater support for the development of joint research between the public and private sector:

- As before, general grants are available on an open-tender basis for research projects in both the public and private sector. However, greater consideration is now given to the field of research in assessment of applications. It is also aimed to increase the share of grants allocated to the private sector to 40%.

- A new programme sponsoring regional knowledge centres is underway. As of spring 2005, projects for six university-based research centres had been awarded grants each worth HUF 1-2 billion and there are plans to support up to four more projects. The grant money goes towards the construction of new research facilities as well as research posts.

The increased attention to the field of research in deciding on grant proposals is part of a wider strategy of increased targeting in R&D policy. One advantage of focusing policy resources on particular areas of research is that this can help reach the critical mass needed to set off a virtuous circle of network and scale effects. On the downside, increased targeting means taking greater risks on which research areas have the potential to become research specialities. On this latter point, the use of both private and public-sector advisors to help develop policy suggests that the authorities are wisely canvassing a wide range of opinion in selecting research areas. *Increased targeting also means it is important for the government to follow-up its plans to create a monitoring system of projects supported by grants. The monitoring system could usefully include broad monitoring of the targeted research fields as well as tracking of the individual R&D projects that have received support so as to help strategic responses to developments in the international research industry*. A range of considerations need to play a role in allocating funds, partly because allocation on the basis of likely success in commercial application is difficult. For example, *one additional criterion the authorities might consider is the potential for spillover effects in research projects.*

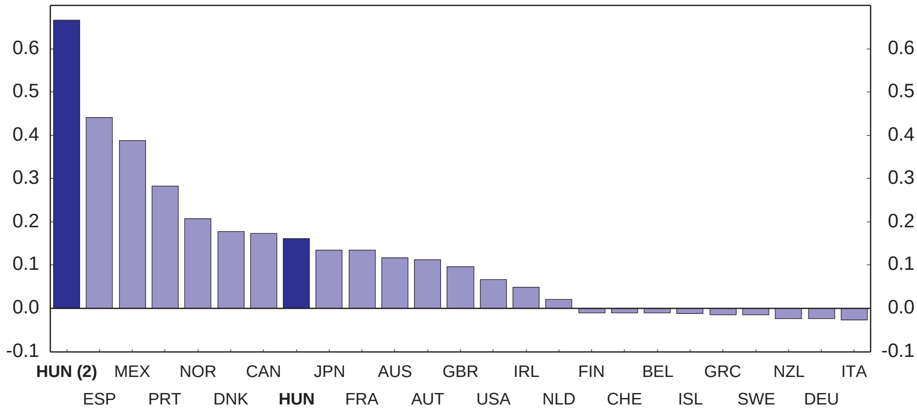
Tax breaks for R&D expenditure: at best having a limited impact

Tax-breaks on R&D expenditure have been increased in recent years. In 2001 the basic deduction of R&D expenditure from the profit base used to calculate corporate tax was increased from 20 to 100%. Since then further tax allowances have been introduced, including a 300% allowance when R&D is conducted by a public research institution and an allowance on R&D-related wage costs (see Box 5.2).

The tax allowances imply a relatively high tax subsidy on R&D spending compared with other OECD countries (OECD, 2004a). Calculations show the 100% tax allowance implies a subsidy of 0.16 cents for every dollar equivalent of R&D expenditure and the 300% allowance implies a subsidy of 0.66 cents (Figure 5.3). By comparison quite a few OECD countries have no (or negligible) tax subsidies and only a few have higher subsidy rates than that implied by the 100% allowance, while the 300% allowance implies the highest subsidy rate among those countries compared.

Figure 5.3. **Tax breaks for R&D activities**

Percentage ratio of tax subsidies for $1 of R&D, 2004[1]



1. Tax subsidies are calculated as 1 minus the B-index. The figure shows calculations for large firms. For one or two countries (not including Hungary) the results of the calculation for small firms are different.

2. HUN refers to the standard care of a 100% tax allowance for research and technology development (which also applies to subcontracted R&D if the partner is a public or non-profit research organisation). HUN (2) refers to a 300% allowance which is available if the company's R&D laboratory is located at a university or public research site.

Source: OECD (2004), *OECD Science, Technology and Industry Outlook*.

Only a relatively small number of firms (currently around 400) utilise the tax allowance, though their average size is large.[9] The low number is perhaps less surprising than it appears; as Chapter 1 points out statistics suggest there are only several hundred identifiable private-sector R&D units. While the allowances clearly support the profitability of some firms it is much more difficult to assess the impact on R&D activity. The increase in the tax allowance from 20 to 100% in 2001 did not obviously prompt an increase in the number of firms taking-up the allowance. However, around this time private-sector R&D activity did increase, suggesting that the impact might have been more through firms with already established R&D facilities. Whatever the nature of the increase, international evidence suggests the size of impacts on R&D of tax-breaks are low. In a review of the evidence, a report by the European Commission concludes that the price-elasticity of R&D is low (European Commission, 2003), implying that when tax measures are used to reduce the costs of R&D, there is little reaction in R&D activity. This is supported by recent OECD regression analysis (OECD, 2005a) which finds R&D tax-breaks to play a minor role in explaining cross-country differences in R&D intensity.

Given that the current tax-allowances are relatively generous in international comparison, and that the conclusions of research on the impact of tax relief are often sceptical, the allowances may be too high and deadweight losses substantial. Bearing this in mind, the authorities' should focus on evaluating the impact of the current level of support before deciding on further changes.

New schemes for innovative SMEs

Access to finance is one of the key constraints for innovative SMEs. The amount of venture capital investment in Hungary is small – indeed an OECD review of trends in venture capital suggests Hungary has one of the lowest levels of venture capital investment in international comparison.[10] The main reason for this is that Hungarian investment proposals are not typically large enough to be considered by venture capital businesses because of overheads both in the evaluation of proposals and in the resources that these investors often put into the joint management of firms. The government is countering this problem with a scheme, run in conjunction with the Hungarian Development Bank, to provide financial support for innovative SMEs. It is also introducing special subsidies to help firms overcome the financial constraints generated from the payment of EU grants only after research projects are completed.

The authorities have also introduced measures to encourage SMEs to patent and market new products and processes. SME's can deduct the cost of applying for intellectual property rights (IPRs) from the income-tax base and the government is funding services to help with patents and marketing. In addition, as part of a project to encourage IPRs (VIVACE), the Hungarian Patent Office is to provide a new customer service system and training courses for firms applying for patent or copyright protection. The VIVACE programme also aims to improve the system for resolving disputes between firms – this being seen as one factor putting off high-risk investors.

Regulatory changes to help science-industry links

One of the key steps to increase commercially oriented research has been the introduction of lighter regulations on university spin-off companies. Under legislation introduced this year, universities (and similar institutions) can now set up a spin-off company without applying for government approval and a rule that the spin-off had to have at least 50% public ownership has been scrapped.[11] The same legislation also introduced a new mechanism for the secondment of researchers to the private sector. With agreement from their employers, researchers at universities and public-sector research institutes can now go and work for private-sector R&D companies on unpaid leave. There are no regulations on the length of the period of unpaid leave or on how frequently it can be taken.

While these are useful steps, more regulatory reform is needed. In particular, the Hungarian Academy of Science (HAS) needs to be given stronger incentives to engage in commercially oriented research. The HAS reflects an approach to public-sector research taken in some other OECD countries, in which the state creates a national research institute that aims to attract the best researchers across a wide range of disciplines through relatively attractive conditions, most notably freedom from teaching commitments. Such arrangements can work well for producing basic research but many of the research areas have very little potential for links with industry and there is often little incentive for researchers in areas where the links are potentially strong. Some also argue that the lack of contact with students in these research centres reduces creativity and that many researchers work hard to get into the institution but then lose momentum once they have entered. *One way of helping HAS reform would be to raise the importance of joint work with business in evaluating HAS's research activities and to strengthen the link between performance and budget allocation;* at present only about 10 to 15% of HAS's budget is based on research performance. *Reforms may also require changes to the tenure status of researchers.*

Education policy and innovation

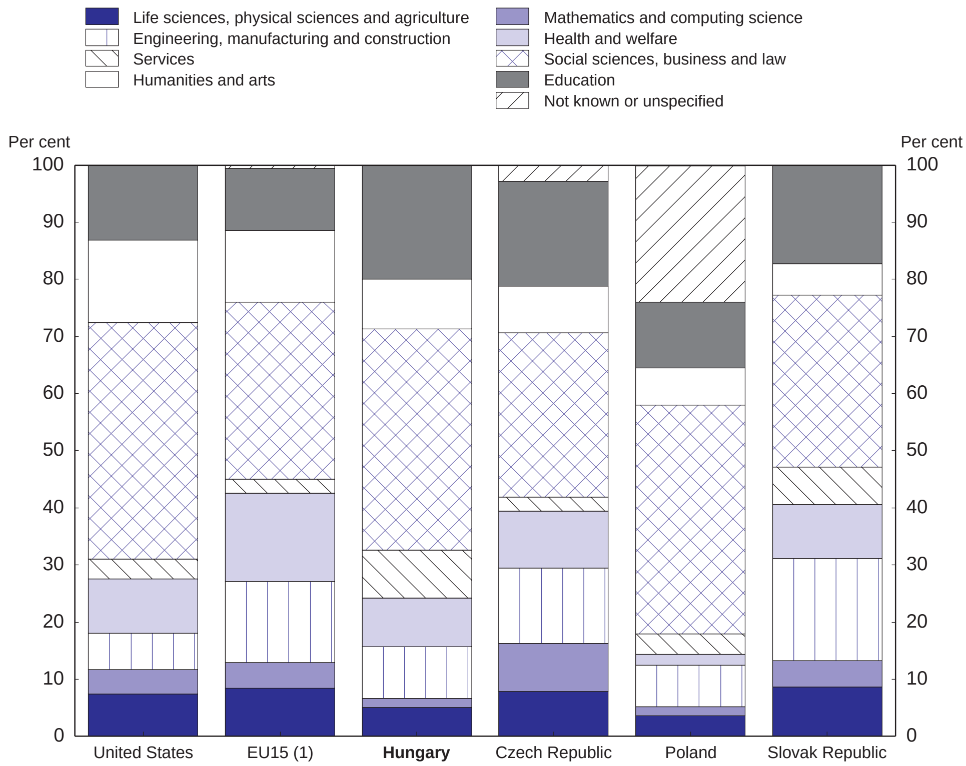
In some respects Hungary's human capital resources for R&D activity are good. In particular its emergence as a production platform in manufacturing, often in high-tech products, has further developed engineering skills in the workforce. Even if this activity may not involve much formally recorded R&D, it is likely in itself to involve a degree of innovation and can serve as a transition to the provision of formal R&D services in product and process development. At the same time, however, the education system could be doing a better job in providing the right skills for such changes as well as in the development of interest and expertise in R&D in the economy in general.[12]

Boosting market signals in tertiary education

One weak spot in Hungary's potential for innovation is the relatively low share of tertiary-education graduates in areas relating to science and technology. Indeed, according to the OECD's *Education at a Glance*, only about 15% of Hungary's tertiary students graduate in either science, engineering, mathematics or computing (Figure 5.4). By comparison, for example, the Czech Republic and Slovakia have about twice the share of graduates in these areas.[13]

Figure 5.4. **Tertiary graduates by field of study**

2002



1. Unweighted average of the latest available data for the EU15 countries less Greece, Luxembourg and Portugal.

Source: OECD (2004), *Education at a Glance*.

To some extent the low share of graduates with R&D-relevant degrees reflects weak demand signals. Because the R&D sector is relatively small, it has generated correspondingly small signals to education providers and students compared to the much stronger signals sent by the labour markets in some other areas, notably business-related courses. Though some demand signals get through to the tertiary sector, there has long been criticism that the supply response is nevertheless inadequate and that courses in tertiary education are too long, have insufficient vocational content and are too focused on specific subjects.[14] Students commonly take four-year Masters courses and these often entail unnecessary prolongation and specialisation for the needs of the labour market which weakens the returns to tertiary education.[15]

The introduction of shorter more vocational degrees as part of a new act on education (passed in June this year) is therefore welcome. The new three-year Bachelor-level degree courses will be broader than current courses, have more vocational content and also contain compulsory work experience. On completing this new degree, students will have the option of taking an additional year's study to complete a specialised Masters' course. The new degree structure could well make an important difference to the efficiency of tertiary education in providing labour market skills.[16] Other steps in the new act on education should also strengthen signals in the education system. In particular, the new act makes it easier for students to transfer between universities during their studies, sets up a mechanism for feedback from the career experiences of graduates to new admissions and has established new governing structures.

Market signals nevertheless need further strengthening in tertiary education. In particular, the government should try again to introduce greater consultation between the tertiary sector and business on the content and mix of courses. Early drafts of the 2005 Innovation Act proposed setting up a new system in which tertiary-education providers would have to regularly consult employers and respond more than they currently do to industry demands for changes to the mix and content of courses. This proposal was however resisted by tertiary-education representatives during the re-drafting of the Act on the grounds that the proposal would compromise the independence of educational bodies.

In addition, more pressure is needed for the tertiary education system to shift more quickly out of areas of excess supply. Understandably, it has been easier for the system to respond in subject areas where there is growing demand for courses and the supply response has been more sluggish in areas where falling demand implies the downsizing of university departments. This problem is exemplified by the relatively large number of students taking teaching qualifications; the data in Figure 5.4 suggest about 20% of tertiary students graduate in Education. Even though the number of graduates has fallen considerably, supply continues to exceed demand and many graduates with teaching qualifications do not become professional teachers.[17]

Shifting the subject mix and improving the quality of degree courses could be helped by making greater use of incentives in tertiary-education funding to encourage changes in the allocation of teaching resources. Currently, these transfers are based on per-capita payments. The per-capita amounts vary across courses (roughly reflecting teaching costs) and are set by agreement between the universities and the government. Each year the government sets limits on how many per-capita payments it will fund and these are very tightly defined (over 400 sub-limits are set). Legislation currently before parliament contains proposals aimed to make the system more flexible for universities and the limits more responsive to student demand for places. The incentive structure for students and universities could also be strengthened by the introduction of tuition fees for public-university courses although this would be a sensitive political issue – fees for students were introduced in the mid-1990s but political opposition led to them later being abolished and subsequent governments have not approached the issue again.[18] The main economic argument for fees is that it would help better connect investment with return for university students and provide useful price signals for universities. Fee systems can also help fine-tune subsidy for tertiary education by designing subsidy mechanisms, such as government loans, so that they provide extra help to students from low income households or extra support for certain types of courses.

In vocational training, stronger supply responses to changing labour market demands are also needed. Similar to higher-education, vocational training is often found to not have enough practical content and courses often fail to keep pace with changing labour market demands. In this regard *practical training as well as consultation and cooperation with the business sector should be strengthened.* Proposals in the Hundred Steps programme on vocational training (see Annex 5.A4) look set to tackle some of these issues.

Addressing weaknesses in compulsory education

Compulsory education has a less immediate influence on innovative capacity compared with tertiary education but is nevertheless important as the content and quality of primary and secondary schooling determines the level of basic knowledge and interest in science and technology. Among the recent policy initiatives the most relevant for innovation is a move to bring more problem-solving and work-related skills into school curricula. This has been in part prompted by relatively mediocre PISA 2000 results. The results of PISA 2003 do not show much change over the 2000 results though it is difficult to yet tell whether this reflects policy failure or that curricula changes and changes in teaching methods take time to implement and even longer to show up in school results.[19] In terms of improving the overall quality of compulsory education there is also a welcome move to introduce a new measurement and evaluation system of school and pupil performance (though there are no plans to make the results public).

The authorities have also recently taken steps to boost foreign language skills.[20] The Ministry of Education has launched its World Language programme, the most important measures being the introduction of opportunities for secondary school students to take an extra year of study in intensive language training and a new school-leaving exam in foreign languages. Also, additional financial support is being provided for teachers to learn languages and new tax breaks on the costs of foreign-language courses have been introduced.[21] In addition, programmes are in place to install more ICT equipment and increase IT training in schools.

Some argue there are important weaknesses in the structure of compulsory education that also need attention. Students are split into separate vocational and academic schools at an early stage on the basis of a single examination and the possibility of transferring between streams is limited. *The authorities should take stock of this aspect of the system given its likely propensity to misallocate students and that the division into vocational and academic streams is anyway less useful in the context of providing skills for modern labour markets.*

Furthermore, the teaching profession currently faces considerable challenges. There is widespread concern that, though there is a degree of over-staffing (particularly in primary and secondary schools), inflows of new teachers are nevertheless needed but the profession is failing to attract recent graduates of the desired ability.[22] In addition it is proving difficult to motivate practising teachers. For instance, a survey of school heads and deputies indicates a lack of opportunities to motivate teachers as the most serious problem affecting schools (National Institute of Public Education, 2004). Another sign of problems in the system is that it is common for teachers to hold second jobs, suggesting that focus on professional career development is weak.

To tackle these problems, a recent review of teacher policy in Hungary (OECD, 2005b) calls for *better alignment of teacher education, reward structures, professional development and school needs.* The recruitment and motivation problems in the teaching profession are largely due to a mixture of poor pay but at the same time strong job protection. *Pay structures need to be reformed.* As for other public-sector employees, prior to the 50% pay increase made over the period 2001-2003, pay relative to the private sector had long been deteriorating. For instance, between 1989 and 2001 secondary-school teachers' earnings fell from two-thirds to one half of average earnings among those with tertiary education (OECD, 2005b). The recent large pay increase should have helped somewhat ease problems with motivation. Nevertheless, problems remain in teachers' pay scales. Performance-linked components are weak; for junior teachers, initial salaries are low and rise slowly – the salary schedule concentrates most rewards for senior teachers. The recently large pay increase is however unlikely to have significantly reduced the number of teachers holding second jobs, as it was not accompanied by a change in job requirements. In addition to pay issues, *excessive job protection needs to be addressed.*

The high level of job-protection is associated with teachers' status as civil servants, and is undermining mechanisms to address underperformance and prevents the implementation of redundancy policies, contributing to the problem of over-staffing and hindering rejuvenation of the profession.

Notes

1. The Hungarian authorities have chosen to use the term "National Innovation System" in English translation for the new structure of government bodies (see Annex 5.A1). It should be noted that the term 'national innovation system' is also used by experts on science and technology policy to refer more broadly to the overall system of institutions that contribute to the creation and diffusion of technology, including firms research institutes and universities, as well as government bodies.

2. For an assessment of R&D expenditure targeting see Sheehan and Wyckoff (2003). Details of EU-funded projects relating to R&D can be seen in European Commission (2005).

3. For example data in the latest OECD *Communications Outlook* (OECD, 2005b) show that in mid-2004 Hungary had one of the lowest numbers of broadband subscribers per head of population. Data for Hungary on wider indicators of household and business access to the internet are as yet not available in OECD databases. Among businesses the gaps in internet access are much lower than across households across OECD countries and so Hungary is likely to be less far behind on this front compared with the situation among households. For OECD assessment of the economic impact of ICT see OECD (2004c).

4. Training on ICT and tax refunds for teachers and pupils buying computer equipment are to be extended to all households. The National Broadband Strategy (2004-06) aims for broadband services to be available to 80% of households and 90% of businesses by 2006. The Strategy also entails increasing broadband links in the public sector. The Act on Electronic Communication (2004) also aimed to improve ICT diffusion by increasing transparency in the markets for phone and internet services and by increasing consumer protection.

5. Not only are prices high for the volume and type of telephone calls made by business, they are also relatively high for household Internet access. Price data on an exchange-rate basis from the OECD's latest *Communications Outlook* (OECD, 2005b) show:

   – as measured in November 2004, an internet access package with 512 kilobits per second download speed cost the equivalent of about $42 per month, in many other OECD countries the price for a similar product is at least $10 cheaper than this. An informal look at prices at end March 2005 suggests Hungarian prices may have come down by about $5 since then.

   – as measured in August 2004, a composite basket of fixed-line telephone charges including international calls and calls to mobile networks had the highest price in Hungary at about $750 per annum, the price in other OECD countries being typically between $600 and $700.

   – as measured in August 2004, mobile phone service price comparisons with Hungary varied a lot according to the level of use. With low-level and medium level use, mobile telephony appears to be one of the cheapest in the OECD, however high-level use appears to make it one of the most expensive.

6. For a description of innovation policy by the government authorities see NKTH (2004).

7. The public administration costs for the NKTH and the KPI are estimated to have been 2% of the value of the Fund in 2004. However estimates of the cost of collection by the Tax Authority are not available.

8. As explained in Annex 2.A1 in Chapter 2, Structural Funds are made available on the basis of member countries' Development Plans.

9. 2001 data show that 400 firms using the tax-breaks for R&D employed around 8% of employees (though most of the employees would not be working directly on R&D). A subset of about 90 large firms received about HUF 22 billion of the total of HUF 29 billion of tax allowances in that year.

10. The OECD has conducted a series of peer reviews on venture capital. See OECD (2003c) for the summary report.

11. In order to protect against spin-off ventures taking excessive risks with government property, universities can only invest an amount equal to one half of the profit earned on commercial ventures in the previous year.

12. A comprehensive overview of education in Hungary can be found in National Institute of Public Education (2004).

13. It is likely these differences reflect in part (though not significantly) differences in education systems and classification methods across countries. The low number of engineering graduates in Hungary is partly because some engineering qualifications are "below" degree level and not reflected in these statistics. Also, there are thought to be some differences in how those taking teaching qualifications are classified. In Hungary, for example, those who have science degrees but who then go on to get a teaching qualification are classified as teaching graduates and this may differ from practices in other countries.

14. An example of the business community's view on the education system can be found in Amcham (2004).

15. A research paper by Galasi (2004) estimates wage equations for Hungarian higher-education graduates and concludes that a broader degrees can indeed be advantageous because they allow access to a wider range of jobs. The paper also underscores (perhaps not surprisingly) that qualifications in information and communication technologies, economics and business and foreign languages are particularly significant in boosting earnings.

16. For example a recent OECD review of the Finnish polytechnic system (OECD, 2003a) finds that shorter and more vocationally oriented degrees have been popular with students and evaluations of labour market experience on graduation have been positive. Finland is similar to Hungary in that university degree courses are typically fairly long with a strong academic component. The policy response in Finland was to set up polytechnics to provide more vocational courses, in contrast to the Hungarian approach of providing more vocational degrees through the existing university system.

17. According to a report on higher education by the Ministry of Education (Ministry of Education, 2002) over 20% of students were in teacher training in 1990 and by 2000 this had fallen to less than 15%.

18. There was an attempt to introduce university tuition fees in the mid-1990s as part of the so-called Bokros Package. Although the fees were small and there was extra assistance for students from low-income households, they were met with strong resistance and later abolished.

19. The 2006 PISA study will focus on scientific literacy and should provide useful input to future policymaking on developing the appropriate approach to innovation in the education system.

20. The focus on language skills has in part been prompted by data in the EU's Innobarometer (European Commission, 2004) that show foreign-language skills to be relatively weak in Hungary.

21. The World-Language Programme also made a special promotion of languages in the 2003/04 school year.

22. Overly high numbers of teachers is shown, for example in OECD indicators which show the ratio of students to teaching staff to be very low in Hungary in international comparison, particularly in primary and lower-secondary education (OECD, 2004b).

BIBLIOGRAPHY

Amcham (2004), *Education as a Pillar of Hungarian National Competitiveness*, American Chamber of Commerce, Position Brief No. II, Budapest.

European Commission (2003), "Raising EU R&D Intensity", Report to the European Commission by an independent expert group.

European Commission (2004), *Innobarometer 2004*. European Commission, 2004.

European Commission (2005), *European Trend Chart on Innovation: Annual Innovation Policy for Hungary*, European Commission, 2005.

Galasi, P. (2004), "Estimating Wage Equations for Hungarian Higher-Education Graduates", *mimeo*.

Ministry of Education (2002), *Higher Education in Hungary*: *Heading for the Third Millenium*, Ministry of Education, Budapest.

National Institute of Public Education (2004), *Education in Hungary, 2003*, Budapest.

NKTH (2004), *Research and Development in Hungary*, 2003-2004, National Office of Research and Technology, Budapest, 2004.

OECD (2003a), *Reviews of National Policies for Education: Polytechnic Education in Finland*', OECD, Paris.

OECD (2003b), *Science, Technology and Industry Scoreboard*, OECD, Paris.

OECD (2003c), "Synthesis Report: Venture Capital Trends and Policies", internal OECD document.

OECD (2004a), *Science and Technology Outlook 2004*, OECD, Paris.

OECD (2004b), *Education at a Glance*, OECD, Paris.

OECD (2004c), *The Economic Impact of ICT*, OECD, Paris.

OECD (2005a), *Communications Outlook*, OECD, Paris.

OECD (2005b), "*Country Note: Hungary*", a report prepared for the Attracting, Developing and Retaining Effective Teachers Project, Directorate for Education, OECD, Paris (forthcoming).

OECD (2005c), "Innovation in the Business Sector", OECD, Paris, internal OECD document.

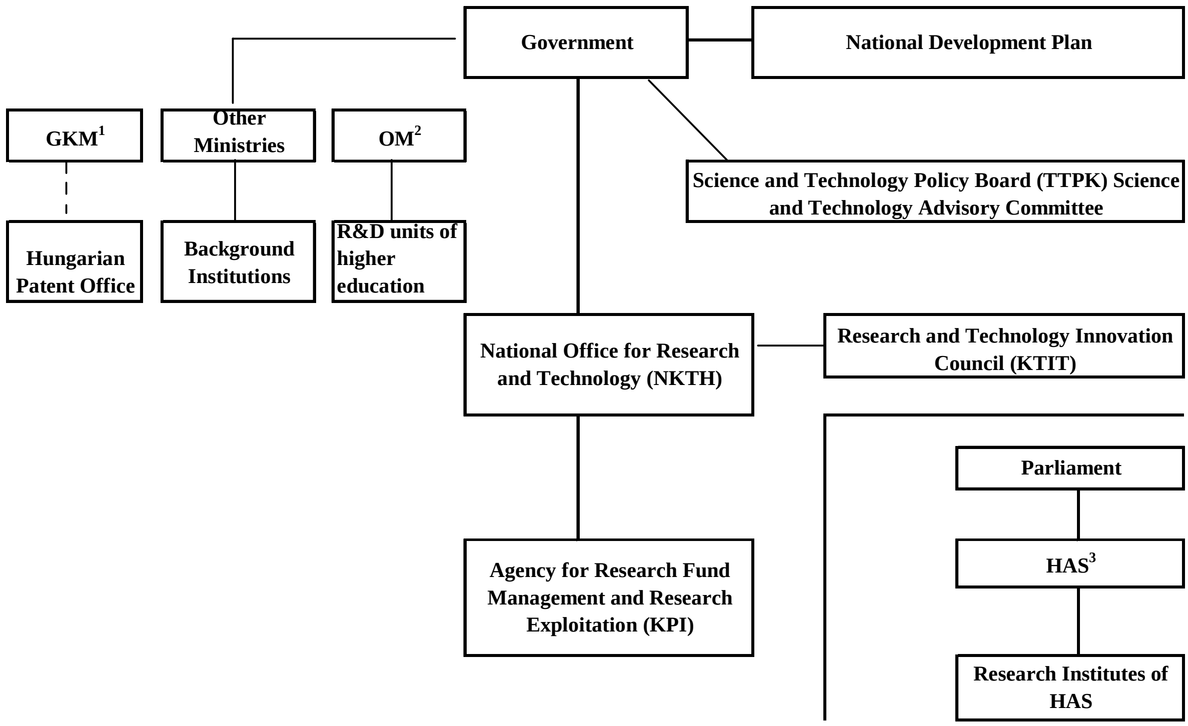
OECD (2005d), *SME Outlook*, OECD, Paris.

Sheehan, J. and A. Wyckoff (2003), “Targeting R&D: Economic and Policy Implications of Increasing R&D Spending”, *OECD Science Technology and Industry (STI) Working Paper*, 2003/8.

ANNEX 5.A1. THE NATIONAL INNOVATION SYSTEM

The decision-making and administrative framework for innovation policies has been changed significantly over the past couple of years. The new National Innovation System is headed up at the political level by the Science and Technology Board (TTPK) (Figure 5.A1.1**)** which is chaired by the Prime Minister with the Minister of Education and the President of the Hungarian Academy of Sciences as Vice Presidents.[1] This board is advised by the Science and Technology Advisory Committee (the TTTT) which comprises R&D and science experts and manages a new executive body, the National Office for Research and Technology (NKTH). The Office is responsible for overseeing the implementation of the government's R&D strategy, and part of its work includes the management of the new Research and Technology Innovation Fund (often referred to as the Innovation Fund) as well as EU Structural Funds relating to innovation (see below). Other tasks of the NKTH include maintaining international relations on science and technology issues (notably with the European Commission) and raising public understanding and awareness in research and innovation. Much of the work of the NKTH is carried out by a subsidiary body, the Agency for Research Fund Management and Research Exploitation (KPI).[2]

Figure 5.A1.1. **The National Innovation System of the Hungarian Government**



1. Ministry of Economy and Transport.
2. Ministry of Education.
3. Hungarian Academy of Sciences.

Source: National Office for Research and Technology.

Notes

1. The Science and Technology Board was set up in April 2003, a similar board existed in the past but had been dissolved.

2. The Agency for Research Fund Management and Research Exploitations (KPI) has the following roles:

   – Financing R&D and innovation projects through a system of open tender funded by the Innovation Fund. The open-tender system has been in existence for some years but was previously funded by central government transfers.

   – The KPI is the accredited intermediary body in the management of EU-Structural Funds that fall under the Research, Development and Innovation priority laid out in Hungary's National Development Plan submitted to the European Commission.

   – KPI is also responsible for running programmes promoting public-private partnerships and for providing advisory services to stakeholders in science and technology at the national and regional level.

ANNEX 5.A2. THE PRINCIPAL HEADINGS OF THE *SMART HUNGARY PROGRAMME*

The Smart Hungary Programme is a term used by the Hungarian authorities for tax and support schemes aimed at encouraging investment (both by small and large businesses). The aim of the programme is that its various elements can be selectively packaged up to suit investor needs. Some of the elements, such as tax-related incentives provide general support, while others are limited and granted through competitive tender. Furthermore, the individual schemes listed in Smart Hungary are often relevant in other contexts. Notably a number of schemes are targeted innovation measures. EU membership has brought a change in financing of some of the Smart Hungary schemes with the government tailoring administrative structures so as to tap into EU structural and cohesion funds. From 2004 onwards most tender applications were incorporated into the Operational Programme of the National Development Plan, mainly in the Economic Competitiveness Programme.

Tax-related incentives

New development tax benefit. "Tax holidays" for relatively large investments (see main text).

Tax-free investment reserve. Under certain conditions, if firms set up an investment reserve, tax payment can be deferred to the year following the utilisation of the reserve.

Tax-base reduction for R&D expenditure.

Tax-related incentive for adult education.

Reduction of health care contribution.

Support schemes

A wide range of support packages are available for different aspects of business activities including:

Infrastructure. For large investments, a business site can be provided.

Outbound infrastructure. Subsidies for infrastructure outside the business site boundaries for large investments of more than € 50 million. Non-refundable grants are available both for greenfield and non-greenfield investments.

Vocational training, adult education and employment subsidy. Various subsidies funded by the Labour Market Fund.

IT development. Support for investment in broadband Internet networks and internet activities.

Environment-friendly investment such as those that use renewable sources of energy, or reduce noxious emissions.

There is also support for particular types of business, notably *high-value-added activities* and *international service centres.*

Administrative support

Packaged investment promotion. Potential investors are offered investment promotion packages.

A "one-stop shop" system for investors.

Other administrative support measures include: acceleration of the issue of work and residence permits, uniform positions on tax issues and faster customs procedures.

ANNEX 5.A3. HUNGARIAN SME POLICY

Some years ago, SME policy was given additional impetus with the launch of the Széchenyi Development Programme which grouped together and reformed a number of existing SME measures and also brought in new measures (notably the "Széchenyi Card" – a system of subsidised loans). Policymakers still sometimes refer to the Széchenyi Programme as embodying SME policy, even though there are a number of schemes that are not included in it.

In terms of specific measures, financial support includes targeted tax relief, loan subsidies and grants for high-tech and knowledge-based investment projects. Non-financial support includes assistance in e-business, support for network clusters and technical assistance for SMEs applying for EU grants. As this list suggests (and similar to support for large-investment) there is some common ground between SME policy and innovation policy.

Guidance to the range of support on offer is provided through a new SME website (www.lendulet.hu) developed by the Ministry of Economy and Transport introduced in April 2005 (this has replaced the publication of an annual "funding map", see OECD (2005d) for further details on policy measures). As in many other areas of policy, the authorities have geared up the structure of SME programmes so as to take advantage of opportunities for EU structural and cohesion funds.

One of most important measures taken recently has been the introduction of an option for a simplified tax treatment (the "EVA") in 2003 which has proved very popular among small businesses. Figures presented by the Hungarian authorities to the European Commission show that the amount paid under EVA is no lower than that which would be paid through the various taxes that the EVA replaces. The previous *Economic Survey* suggested that leakage of loan support may be significant and contributing to the exceptionally high profits of the banking sector. Also of note, the adoption of EU regulations into SME legislation in 2004 has meant that about one thousand previously "large" companies are now eligible for SME support.

ANNEX 5.A4. MEASURES PROPOSED IN THE HUNDRED STEPS PROGRAMME ON VOCATIONAL TRAINING

As described in Chapter 1, in April 2005 the government began to announce a large number of structural reform measures – collectively called the Hundred Steps programme. This annex outlines the measures proposed in vocational training based on available information provided by the Ministry of Finance in mid-June 2005.

1. An employee training card will be introduced.

2. Training in professions where there is a shortage of workers will be supported.

3. The number of professions in National Register of Qualifications will be halved.

4. Training for professions in strong demand will be supported by a supplementary norm.

5. From 2006 there will be a preparatory education in technical schools for young people who could not finish elementary education.

6. Establishment of 22 regional integrated vocational training centres partly financed from EU and labour market resources.

7. An advisory board will be established in vocational training centres.

8. The number of young people with 'study contracts' will be increased from 22 000 to 26 000.

9. Exam requirements will be changed.

10. People over 50 will be able to get new qualifications with subsidy.

11. In the 9th and 10th year of compulsory education the role of practical training will be increased.

12. New financing of the career-oriented education in vocational training.

13. Practical training will be assured in adult training.

14. 2 000 young people will be supported through the "Provision" scholarship program.

GLOSSARY

ÁAK	State Motorway Operating Company
APW	Average production worker
ARDOP	Agricultural and Rural Development Operational Programmes
ECOP	Economic Competitiveness Operational Programmes
EMU	Economic and Monetary Union
EPIOP	Environmental Protection and Infrastructure Development Programmes
ERMII	Exchange Rate Mechanism
ESA95	European Standard Accounts
EVA	Simplified Entrepreneurial Tax
FIDESZ-MPSZ	Young Democratic Alliance – Hungarian Civic Union
GDP	Gross domestic product
GFS86	Government Finance Statistics
HAS	Hungarian Academy of Science
HDGs	Homogeneous Diseases Groups
HIF	Health Insurance Fund
HRDO	Hungarian Rural Development Office
HRDOP	Human Resources Development Operational Programmes
ICT	Information and communication technology
IPR	Intellectual property rights
IT	Information technology
KPI	Agency for Research Fund Management and Research Exploitation
LFS	Labour Force Survey
MNB	Magyar Nemzeti Bank (the Central Bank)
MoARD	Ministry of Agriculture and Rural Development
MSZP	Hungarian Socialist Party
NAO	National Authorising Office
NDO	National Development Office
NHIFA	National Health Insurance Fund Administration
NKTH	National Office for Research and Technology
NPHMOS	National Public Health and Medical Officer Service
PAYG	Pay-As-You-Go System
PISA	Programme for International Student Assessment
PIT	Personal Income Tax
PPPs	Private public partnerships
R&D	Research and development
RDOP	Regional Development Operational Programmes
SME	Small and medium-sized enterprises
SZDSZ	Alliance of Free Democrats
TTPK	Science and Technology Board
TTTT	Science and Technology Advisory Committee
VAT	Value-added tax